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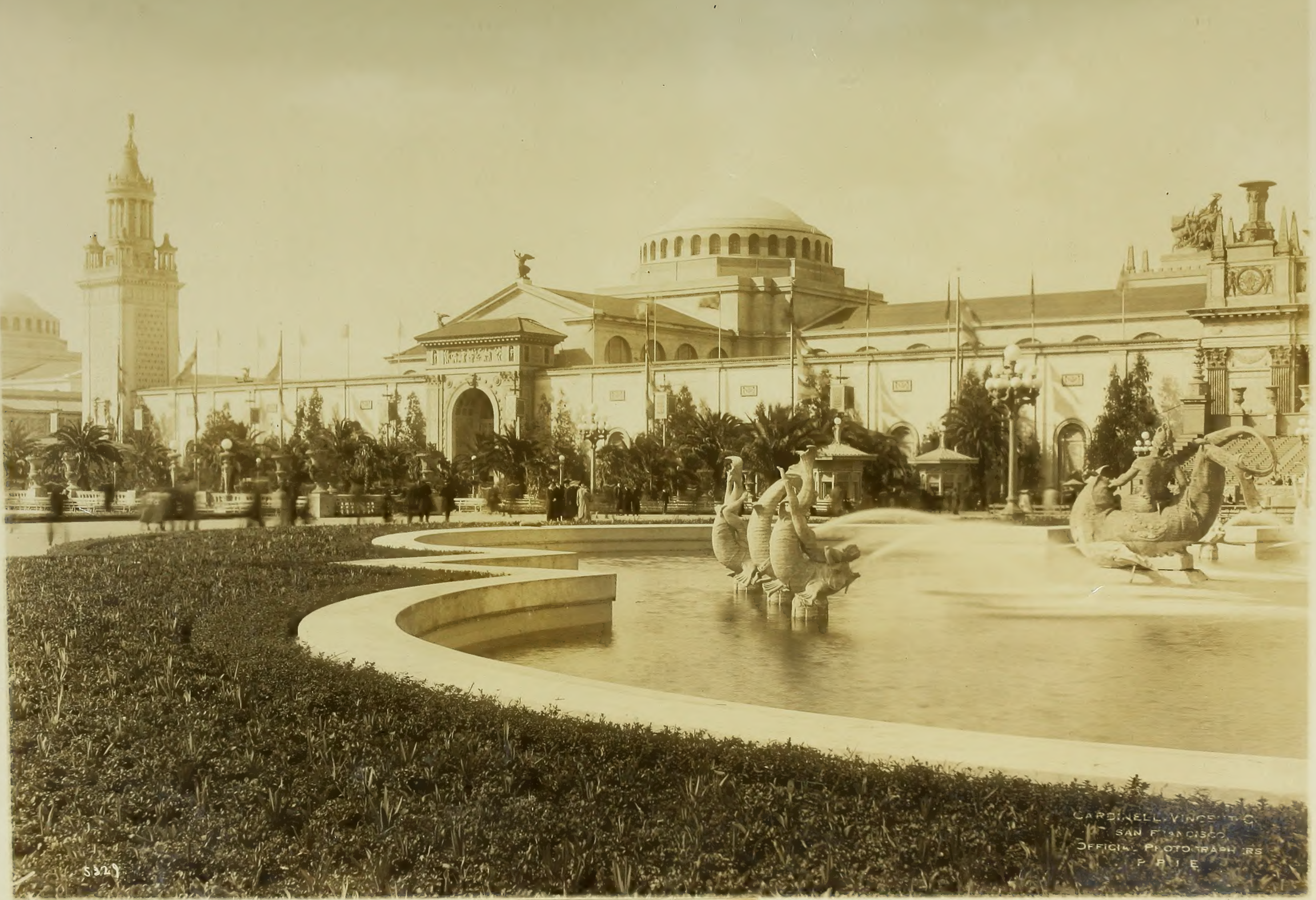

Liberal Arts Palace

Final Report
of
Theodore Hardee
Chief of the Department
of
Liberal Arts
to the
Director of Exhibits

Panama-Pacific
International Exposition
San Francisco
1915.

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INTRODUCTORY

This report has been prepared with a view of enabling all interested to understand the experiences, the plan of organization and exploitation, the time taken, the personnel of the working staff and what the Liberal Arts Department represented. The aim was to make it as brief as circumstances permitted, and fully explanatory and understandable. To others who may happily be chosen to take up the work of Liberal Arts at an Exposition this information may prove of benefit, and to the layman it will make clear the work, the events, and the conditions to be met with in this important Department of the Division of Exhibits.

PANAMA-PACIFIC INTERNATIONAL EXPOSITION
1915
PALACE OF LIBERAL ARTS

DIVISION OF EXHIBITS
OFFICE OF THE CHIEF
DEPARTMENT OF
LIBERAL ARTS

SAN FRANCISCO,
CALIFORNIA.

December 31, 1915.

Captain Asher Carter Baker,
Director of Exhibits,
Panama-Pacific International Exposition,
San Francisco, California.

Dear Sir:

I have the honor to submit the following report on the Department of Liberal Arts at the Panama-Pacific International Exposition:

The Liberal Arts Department was organized by me upon my appointment as Chief of the Department on January 1, 1913. A systematic and active campaign was immediately inaugurated for the purpose of securing exhibitors.

The Department's first offices were located in the "Exposition Building" (corner Battery and Pine Streets, San Francisco), which was the Administrative Headquarters of the Exposition.

The work began with one stenographer, Miss Gertrude Ferguson. Our first effort was to obtain the names of manufacturers of Liberal Arts products. The bulk of this information was soon obtained through an addressograph agency in New York City. From this and other sources we also secured the names of indi-

viduals and organizations interested in kindred sciences and industries that were not classified, but which we knew existed throughout the commercial world.

The interest manifested at this time by the people of the United States at the prospect of an International Exposition was gratifyingly evidenced by the numerous answers evoked by the large number of letters and circulars we promptly sent out.

Despite the financial depression which ensued soon after as the result of the change in the tariff and the new currency law, a good, healthy interest in the Exposition was maintained by exhibitors until the European war broke out in August, 1914. The panicy feeling among Eastern manufacturers immediately became evident in the many and continued withdrawals and cancellations of space applied for in the Liberal Arts Department. By December 1st fully two thirds of the 172,000 square feet of exhibit space available in the Palace of Liberal Arts had been canceled. However, by dint of the hardest kind of work and unremitting vigilance and activity the Department managed to fill these vacancies in time to have every foot taken before the opening of the Exposition on February 20, 1915.

Not only was the Liberal Arts Palace filled with attractive booths and interesting and instructive exhibits by opening day, but the Department of Liberal Arts had also filled 30,000 square feet of floor space covered by fifteen booths in Machinery Palace, where a "Liberal Arts Section" was located containing printing presses and equipment, road machines and similar heavy operating exhibits classified as Liberal Arts products.

The Liberal Arts Department was organized especially to interest exhibitors of that class to exhibit and demonstrate their products, as well as to show the public the results of their research work, both as an educational feature and means of utilization.

When it came to considering these exhibits for award it was not as much in the origin as it was in the application that they were judged. For example in the Liberal Arts Department we included books and publications. Whether they should have been classified in the educational sense or in the mechanical category was a question which caused no end of worry and discussion among the jurors. The Jury finally

decided to judge this Department's exhibit from the mechanical and not from the educational viewpoint, leaving the latter to the Department of Education. Even this brought about the question that if the Department of Liberal Arts should judge these from a mechanical standpoint, all the books included in the Department of Education should have been judged for the mechanical make-up as well as the books in this Department. On the other hand, the Department of Education should, perhaps, have judged all our books and publications from the viewpoint of education.

Another problem which caused some anxiety and made difficult the question as to whether books should be classified under Education, Liberal Arts, or be decided under the classification of the subjects they treated, came about in the consideration of technical journals, such as: "The Journal of Electricity", "Electrical World", "Machinist", "Mining World", "Arts and Crafts", etc. It was finally decided that the Liberal Arts Jury should judge them and this was done purely from a mechanical viewpoint.

Mechanically the publications were fairly good. As a printing art they may have been very good or very bad. Educationally they may have been splendid

and technically they may have been exceedingly good, but how were we to judge, except each juror should read all the subjects contained therein?

The philosophy of the Liberal Arts exhibits is like that of all similar expositions, in that it is essentially an exhibit of education and advertising,- first and foremost advertising. It is an actual and occular demonstration of products as they really exist, brought about because one firm or one country shows its products, and it seems that other firms or countries, who care to compete, must, perforce, exhibit their products. It is all based on the existing word "competition".

An exhibit of Liberal Arts should mean an advance of the industry, science or philosophy shown; a betterment or improvement of the product by comparison; a school of new ideas; a place where people can see an actual demonstration or picture of the things they need in their daily labors, or a means of suggestion to use more advanced principles in their particular industry, thus improving their efficiency and knowledge to a still greater advancement along industrial lines.

The Liberal Arts illustrate the homogeniety of competition; what a collective effort will do to exhibit in one space, under one roof, what the world is doing and can do industrially. However, the results of other expositions have not advanced the contemporary features to the extent they might have done, and, although this was a contemporary exposition, it was to a certain extent apparently lacking in this particular feature. This condition was no doubt occasioned by the stringent times and the war.

It would seem therefore that to induce suitable participation by exhibitors in the future, and to attract sufficient people to visit the exhibit palaces there must be something different. Exhibits and products should be more individualized, more characteristic, from the origin to the finished product, to get away from the stereotyped effects of all past expositions.

ES. Mr. Blythe H. Henderson was the first superintendent appointed by the Department. He was of great assistance during the first days of organization, but was with the Department but a short time, having been transferred to the Department of Transportation as assistant to Chief Baker. He afterwards became Chief of that Department.

Mr. H. W. Kerrigan became General Superintendent and assistant to the Chief of the Department of Liberal Arts, beginning his duties with the opening of the Exposition. His position covered the needs of the entire Department in every way fulfilling the duties of this office. This was during the absence of the Chief, who acted "for the President" in directing the Special Days and Events activities.

Miss Gertrude Ferguson began her duties about January 19, 1913, taking up the detail office work during the organization period. Later she was appointed Secretary of the Department and proved highly competent and thorough. In fact much of the responsibility for the Department, in the absence of the Chief, devolved upon Miss Ferguson, who fulfilled these duties to the great sat-

isfaction of the Department. Miss Ferguson, however, left the Department May 30, 1915, to accept a position in South America.

Charles K. Bolton, Superintendent of Installation, commenced his duties as custodian and Installation Superintendent on December 18, 1914. As an experienced engineer he was especially well qualified to carry his particular duties. His untiring energy and the conscientious discharge of these trying duties contributed largely toward the satisfactory solution of the many vexing problems arising in connection with installation of exhibits.

Daniel R. Gailey, draftsman and Superintendent of Graphic Arts and Photography Installation, was well qualified to fulfill the duties of these two groups. His active knowledge of architecture and artistic taste made him a most acceptable man to carry on this work. He was really responsible for the successful installation of the Pictorial Photography Booth.

Della De Young, who was first employed as File Clerk December 15, 1914, and afterward became Secretary, succeeding Miss Ferguson, in May, 1915,

was a most competent and thorough worker in the interests of the Department. Her capacity for work and pleasant personality in meeting the various visitors at the office made her almost indispensable to the success of the Department.

Ethel Reibenstein began her activities October 1, 1914. Her experience with the Exposition during the pre-Exposition and Exposition periods made her very valuable as assistant to the Secretary. She was very willing and particular in her work. She left the Department March 15, 1915, to accept a position with one of the Exhibitors on the Floor.

Grace Kelly, who succeeded Miss Reibenstein, was much devoted to the Department, and aided the Secretary in carrying on the stenographic work. She was of great assistance during the activities of the Jury, at the end of which she left this Department to join the office staff in the Department of Agriculture.

Ella F. Scullin was selected because of her energy and initiative to handle the secretarial work for the International Jury of Awards for the Department of Liberal Arts during this most important period. She performed the functions of Secretary to the Group

and Department Juries and aided very materially in classifying the products for award and assisting the General Superintendent in this work. In fact, she devoted her entire time to the Juries' activities and continued her work in the Department after the Juries adjourned.

Miss Helen Mauser and Miss Gladys Harms were two stenographers taken during the rush times for the purpose of assisting in both jury and office work.

Frank Martinez, messenger boy, began his work with the Department December 5, 1914, and continued until July 1, 1915. His work was of such character that he could have occupied a position in any office where the duties required prompt attention and energy.

John McCarthy, messenger boy, succeeded Frank Martinez, beginning his work July 12, 1915, and was very faithful in his duties.

Lazar Schaff succeeded John McCarthy in a very satisfactory manner after the latter had decided to continue his school work.

In closing, too much cannot be said in praise of all the employes in the Liberal Arts Department, as it was they who made it possible to achieve the great success which the Department attained.

The following list illustrates in a clear way the entire staff of the Department of Liberal Arts, giving their names, position, length of service and salary:

	POSITION	SERVICE BEGAN,	SERVICE ENDED	SALARY
Theodore Hardee San Francisco, Cal.	Chief	Jan.1,'13		$416.16
Blythe H. Henderson, San Francisco, Cal.	Chief Clk			150.00
H. W. Kerrigan, Portland, Ore.	Genl.Supt	Feb.11,'15	Jan.1,'16	250.00
Chas. H. Bolton San Francisco, Cal.	Supt.of Instaltn.	Dec.18,'14	Dec.2,'15	150.00
Daniel R. Gailey San Francisco, Cal.	Draughtsman	Sept.1,'14	Apr.'15	150.00
Gertrude Ferguson, San Francisco, Cal.	Secty.	Jan.1,'13	June 1,15	85.00
Ethel Reibenstein, San Francisco, Cal.	Stenographer	Oct.1,14	Mar.15,15	65.00
Della de Young, San Francisco, Cal.	File Clerk-Secy.	Dec.15,14	Jan.13,16	75.00
Grace Kelly, San Francisco, Cal.	File Clerk		July 1,15	65.00
Ella F. Scullin, San Francisco, Cal.	Stenographer	Apr.20,15	Jan.1,16	65.00
Helen Mauser, San Francisco, Cal.	Stenographer	Apr. 2, 15	Apr.13,15	65.00
Gladys Harms, San Francisco, Cal.	Stenographer	May 1,15	May 6,15	65.00
Frank Martinez, San Francisco, Cal.	Messengr.	Dec.15,14	July 1,15	30.00
John McCarthy, San Francisco, Cal.	Messengr.	July 5,15	Oct.22,15	30.00
Lazar Schaff, San Francisco, Cal.	Messenger	Oct. 22,15	Jan.1,16	30.00

R. LYM—PHOTO,
SAN FRANCISCO

Aerial View from Office

PLOITATION

As a means of exploiting the advantages of the Exposition to those who were wanted for exhibitors the Department of Liberal Arts issued letters covering all the groups classified under the head of Liberal Arts. The following general form of communication was sent out by this Department as a preliminary "feeler" to the various industrial concerns and scientific organizations throughout the United States. The only important variations were when necessary to particularize upon the groups specially covered in the letter.

"The Panama-Pacific International Exposition at San Francisco in 1915 will display in a most comprehensive manner the achievements and activities of mankind during the last decade. Live, working exhibits are especially desirable, showing not only actual products, but also models in operation to illustrate the apparatus and methods employed in arriving at the finished article. In the domain of Liberal Arts the exhibits will be notably interesting and significant.

"The display of GRAPHIC ARTS will be complete and characteristic, embracing the whole range of this broad field. The equipment and various processes of printing, engraving and lithography, newspapers, magazines, books and bookbinding, maps, typewriters, multigraphs, advertising, etc., will be shown at their highest point of development in 1915. Journalism, the prime factor in moulding public opinion, will be fully illustrated.

"These exhibits will be housed in the Palace of Liberal Arts. The exhibits must of necessity be

SELECTIVE in character because of the comparative limitation of space which, by reason of wider participation and the world's more extended productivity, will be more restricted than at previous International Expositions. This will emphasize the advisability of applying for exhibit space as soon as possible.

"We should be pleased to know that you will give serious consideration to the advisability of your participation. In this connection permit me to call your attention to the keen interest manifested by both American exhibitors and Foreign Governments, which assures an Exposition of the most representative international character. Latin America and the Orient will take very prominent parts. Twenty-six foreign countries have already accepted the invitation of the President of the United States to participate, and thirty-five States have also accepted.

"The opening of the Panama Canal means the development of entirely new avenues of commerce, the extent of which it is impossible to overestimate. The Orient and Latin America should prove large and profitable markets for the GRAPHIC ARTS, and the Universal Exposition at San Francisco in 1915 will afford a rare opportunity to bring your products to their particular notice. Blank applications for space, the exhibits Classification and other information prepared for the guidance of exhibitors, will be forwarded on request.

Yours very truly,

(Signed) Theodore Hardee
Chief of Liberal Arts."

The Graphic Arts comprised the following four groups:

Group 29: Typography--Various Printing Processes

Group 30; Books and Publications--Book Binding

Group 31: Maps and Apparatus for Geography,
Cosmography, Topography

Group 32: Manufacture of Paper

GROUP 29

TYPOGRAPHY--VARIOUS PRINTING PROCESSES

In Group 29, Typography--Various Printing Processes, covering eight classes, there were three hundred seventy letters sent out on May 2, 1913, to concerns representing the following classes:

Class 95. Machinery, presses and other apparatus used in typography, lithography, copperplate printing, autography, engraving on stone, copper, zinc, aluminum, etc.

Class 96. Machinery used for photo-mechanical printing.

Class 97. Equipment, apparatus and products of type foundries, and other auxiliary and miscellaneous printing office appliances and labor-saving devices of stereotyping, electrotyping, electrolytic appliances and processes; electro-thermic appliances and processes.

Class 98. Machines for setting and distributing type, casting type, etc.

Class 99. Special equipment for printing bank notes, postage stamps, bonds, etc.

Class 100. Typewriting machines and devices for duplication of copy, mimeograph, neostyle, addressing machines, dictating machines, etc.

Class 101. Specimens in black and color typography, lithography, copper-plate printing and other methods of printing.

Class 102. Specimens of engravings and drawings obtained, reproduced, enlarged or reduced by photo-mechanical processes.

GROUP 30

BOOKS AND PUBLICATIONS--BOOK BINDING

In Group 30, Books and Publications--Book Binding, covering nine different classes, there were eight hundred seventeen letters sent out on May 6, 1913, to concerns representing the following classes:

Class 103. Newspapers, reviews and other periodicals and publications; newspaper and magazine offices or plants shown by models or photographs; means and methods of advertising, news gathering, etc.; methods and processes of publication. (Technical and trade publications may be displayed in the Departments with which they are allied.)

Class 104. Collections of books, forming special libraries.

Class 105. New books and new editions of old books.

Class 106. Drawings for book, newspaper and magazine illustrations, atlasses, albums.

Class 107. Musical publications.)May be displayed
Class 108. Musical scores.)in Group 37.

Class 109. Equipment and processes of making stitched books and of book binding.

Class 110. Specimens of binding, stamping, embossing, gilding, etc.

Class 111. Artistic book binding.

GROUP 31

MAPS AND APPARATUS FOR GEOGRAPHY, COSMOGRAPHY

In Group 31, Maps and Apparatus for Geography, Cosmography, Topography, covering four different classes, there were one hundred seven letters sent out on May 13, 1913, to concerns representing the following classes:

Class 112. Maps, charts and atlasses; geographical, topographical, geological, hydrographical, astronomical, etc.

Class 113. Topographic models in relief.

Class 114. Terrestrial and celestial globes; statistical works and tables.

Class 115. Statistical tables and nautical almanacs for the use of astronomers, surveyers and seamen.

GROUP 32

MANUFACTURE OF PAPER

In Group 32, Manufacture of Paper, covering six different classes, there were nine hundred seventy-five letters sent out June 2, 1913, to firms representing the following classes:

Class 116. Collections of raw materials used in the manufacture of paper and card-board.

Class 117. Equipment and processes used in making pulp from rags, straw, wood, etc.

Class 118. Appliances and processes used in the manufacture of paper by hand.

Class 119. Equipment and processes used in the manufacture of paper by machinery. Machines for producing endless paper. Apparatus for cutting, glazing, calendering, polishing.

Class 120. Apparatus and processes used in the manufacture of special papers and of cardboard.

Class 121. Paper mill products, including papers of common and special grades not made up: paper for newspapers, books, maps, bank notes, drawings; photographic and art papers; paper for stationery; packing, wrapping and blotting paper; filter and laboratory paper; building and stock for wall paper; mill board, and cardboard; papier mache, compressed paper, etc.

GROUP 33

PHOTOGRAPHY

In Group 33, *Photography--Equipment, Processes and products*, covering three classes, there were two hundred thirty-five letters sent out on May 16, 1913, to firms representing the following classes:

Class 122. Materials, instruments and apparatus of photography, equipment of photographic studios, stereopticons, mutographs, kinetoscopes, moving pictures, etc.

Class 123. Negative and positive photography on glass, paper, wood, cloth, films, enamel, etc. Photogravure in intaglio and in relief; photocollography, photolithography. Stereoscopic prints. Enlarged and micrographic photographs. Color photography. Direct, indirect and photocolor printing. Scientific and other applications of photography.

Class 124. Pictorial photography.

The regular form letter was sent to Photographic manufacturers, while on May 20, 1913, the following letter was sent to fifty-one photographic societies:

"The Panama-Pacific International Exposition at San Francisco in 1915 will display in a most comprehensive manner the achievements and activities of mankind during the last decade. In the domain of Liberal Arts, exhibits showing the apparatus and methods employed in producing the finished article will be fully shown, and exhibits comprising the actual products--particularly those of an artistic character--are especially desirable.

"In addition to those branches of Photography which are of general application, the recent developments in color photography, the wider application of photography to surgery, astronomy, chemistry, acoustics and other sciences will also be thoroughly covered. One of the most popular and educational features of this Group will be the exhibit designated as Class 124, covering Pictorial Photography.

"These exhibits will be housed in the Palace of Liberal Arts, together with the products of all other arts except painting and sculpture. Owing to the wider participation that will result from the world's more extended productivity, particularly in the field of Liberal Arts, exhibits must necessarily be SELECTIVE in character.

"This Department is especially desirous of securing as representative an exhibition of Photographic work, particularly that having pictorial merit, as it is possible to obtain. To that end you are requested to give the matter of exhibiting your most serious consideration. A space equaling that devoted to any other art or craft in this building has been tentatively set aside for the domestic Photographic exhibitors, known as Group 33 in the Department of

Liberal Arts. Class 134, one of the three Classes into which this Group is divided, is devoted solely to examples of Pictorial Photography, and it is desired that this Class shall be as comprehensive and representative as possible of the artistic advancement of photography in the United States. This desire is accentuated by the interest and activity manifested by the foreign Governmental Commissions which are charged with the responsibility of collecting displays from their respective countries.

"This invitation goes forward to all those Photographic organizations and individual Pictorial workers whose names and addresses are available to us. For that reason we urge early notification to this Department of the approximate number of prints you or your organization, or its members individually, will submit. This information will enable us to determine the amount of space necessary for this highly important class. Blank applications for space, the exhibits Classification and other information prepared for the guidance of exhibitors, together with matter relative to selection and awards, will be forwarded on request.

Yours very truly,

(Signed) Theodore Hardee

Chief of Liberal Arts."

On May 19, 1913, the following letter was sent to twenty-five photographic journals:

"I have the honor to ask your kind attention to the enclosed letters (This refers to the regular form letter sent to photographic manufacturers and the above letter sent to photographic societies.) inviting the Photographers of all classes and schools in the United States, together with the photograph supply and equipment manufacturers, including moving-picture makers and manufacturers of their machines,

et al, to exhibit at the important Universal Exposition to be held here in 1915 to celebrate the completion and opening of the Panama-Canal.

"As this national celebration of the world's greatest engineering achievement is of international significance, every American is entitled to just pride in our nation's magnificent accomplishment and should take a patriotic interest in helping to make this Exposition the unqualified success it merits.

"No better way presents itself to the Photographers than by hearty co-operation with the Department of Liberal Arts at this Exposition, to the end that there shall be a display of American photography in the Domestic section of this Department that will compare favorably with whatever may be exhibited by foreign photographers in the section occupied by their respective countries in the Palace of Liberal Arts.

"All Americans having the best interests of Photography at heart should be glad to take advantage of this very unusual opportunity to make a showing that will not only advance the interests of this fascinating art itself, but also prove highly creditable to the photographers of the United States in this important Group.

"May we, therefore, in the interest of American photography as a whole, and the great national celebration this Exposition represents, count upon your active co-operation by giving adequate publicity to this subject in the columns of your valued publication?

"Thanking you in advance for your assistance, and hoping to be favored with your continued interest, I remain,

Yours very truly,

(Signed) Theodore Hardee

Chief of Liberal Arts."

GROUP 34

INSTRUMENTS OF PRECISION, PHILOSOPHICAL APPARATUS, ETC., COINS AND MEDALS

In Group 34, Instruments of Precision, Philosophical Apparatus, etc., Coins and Medals--equipment, processes and products, covering ten classes, there were three hundred thirty-eight letters sent out on April 25, 1913, to concerns representing the following classes:

Class 125. Laboratory apparatus for physical investigations; mathematical instruments; instruments for practical geometry; instruments for refined physical measurement; sensitive balances, high grade thermometers, indicators, integrators, chronographs, etc. Lecture room apparatus.

Class 126. Instruments for and methods of land surveying, including plane, topographic and geodetic surveying. Surveyors' compasses, leveling instruments, transits, geographic instruments, pedometers, heliotropes, etc.

Class 127. Astronomical instruments and methods; telescopes and fittings, astronomical photographic apparatus and photographs; reflectors, helioscopes, astronomical clocks.

Class 128. Navigation instruments and equipment; including sextants, mariners' compasses, alidades, patent logs, sounding machines, chronometers, etc. Meteorological instruments, thermometers, barometers, wind current meters, etc.

Class 129. Electrical instruments and apparatus for scientific investigations or research work; electrical furnaces for laboratory use; thermal batteries; electrical standards.

Class 130. Photometry; apparatus for determining the intensity, distribution and illuminating power of light. Standards.

Class 131. Transferred to Class 542.

Class 132. Optical instruments for general use; telescopes, binoculars, opera, field and marine glasses, magnifying glasses. Lenses for testing vision; eye glasses and spectacles.

Class 133. Calculating machines; cash registers; scales, weights and measures of various countries.

Class 134. Equipment for the manufacture of coins and medals. Appliances for weighing the metal, testing the standard of alloys, melting and casting, rolling, stamping out, milling, washing, verification of weight of coins, counting, striking, and checking them before delivery; equipment for the preparation of stamps and dies, coins and medals; treatises upon coins, economical, statistical, etc.

GROUP 35

MEDICINE AND SURGERY

In Group 35, Medicine and Surgery, covering thirteen classes, there were two hundred sixty-six letters sent out on April 25, 1913, to concerns representing the following classes:

Class 135. Appliances, instruments and apparatus for work in anatomy, histology and bacteriology; anatomical models; normal and pathological, histological and bacteriological preparations.

Class 136. Apparatus for sterilizing instruments and wound-dressing appliances, and for other purposes of sterilization.

Class 137. Instruments for general and special medical research.

Class 138. Instruments and apparatus for general, special and local surgery.

Class 139. Electricity as applied in therapeutics, surgery and dentistry; X-ray apparatus; electric sterilizers, ozonizers.

Class 140. Appliances for dressing wounds.

Class 141. Apparatus for plastic and mechanical prosthesis; orthopedic apparatus; apparatus for hernia; apparatus for medical gymnastics; material, instruments and apparatus for special therapeutics.

Class 142. Instruments and apparatus used in the practice of dentistry; dental surgery, bridge and plate work, etc.

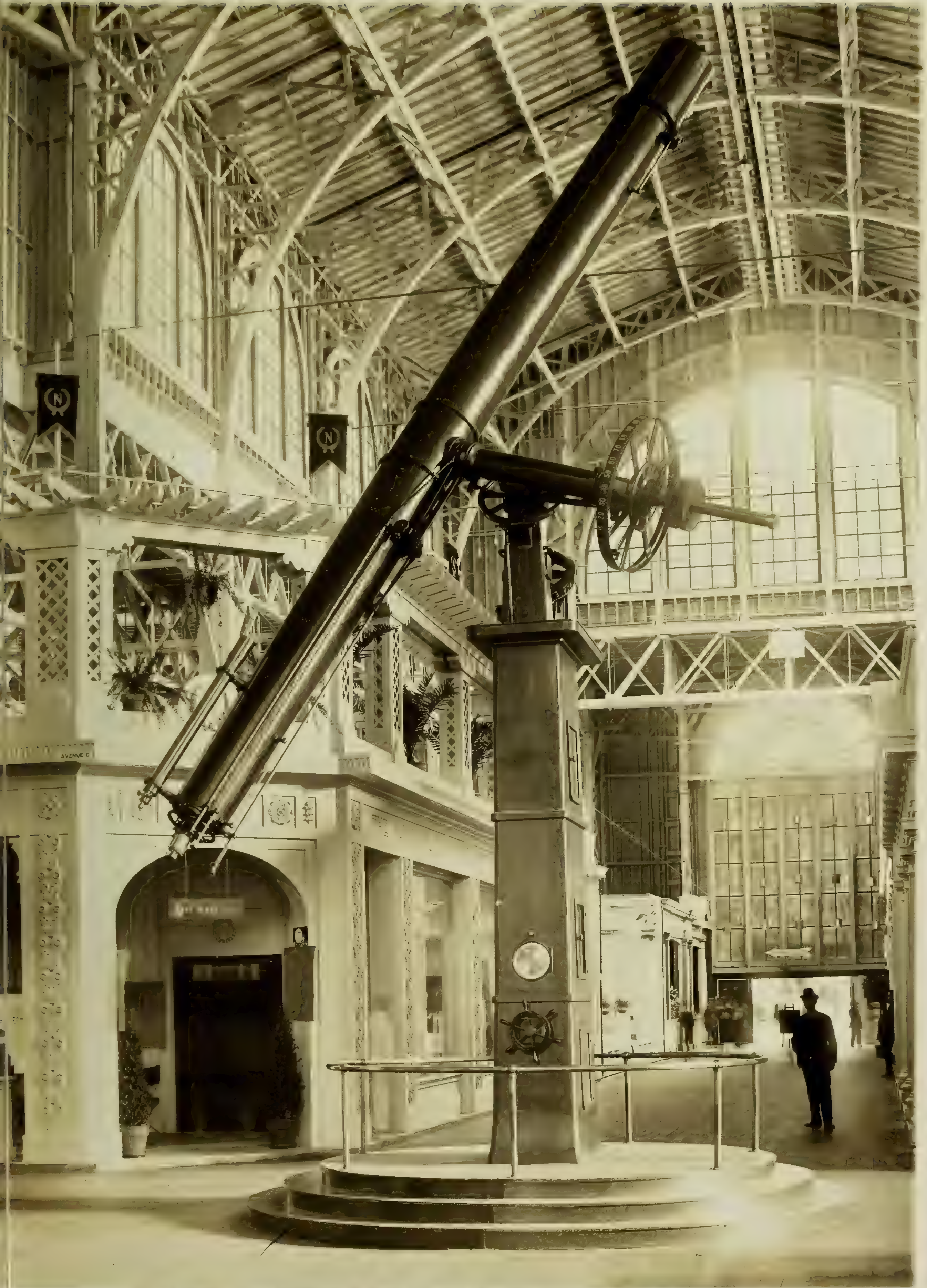
Class 143. Appliances for the use of the infirm, of invalids, and of lunatics; artificial limbs, artificial eyes.

Class 144. Chests and cases of instruments and medicines for the use of surgeons of the army and navy; appliances for rendering aid to the wounded on the field of battle; appliances for rendering aid in case of accident; ambulance service, etc.

Class 145. Appliances for rendering aid to persons apparently drowned or asphyxiated.

Class 146. Instruments and appliances for veterinary surgery.

Class 147. Equipment and utensils used by druggists and pharmacists.



Giant Telescope and South Entrance

or electrical methods) with a view to permitting their return to water courses or to the atmosphere.

Class 156. Equipment for charcoal work and the production of various derivatives, methylated spirit, acetone, acetic acid, tar, wood alcohol, pyroligneous acid. Products of charcoal burning.

Class 157. Apparatus and processes for the compression and liquefaction of gas. Liquefied gases.

Class 158. Apparatus and processes for the manufacture of artificial textiles.

Class 159. Appliances and processes used in the manufacture of pharmaceutical products. Raw materials of pharmacy; sera and other biological products, as bacterines, vaccines, tuberculines, etc.; drugs of mineral, animal and vegetable origin, crude, powdered and compound; special appliances for collecting, cleaning, peeling, slicing, cutting and garbeling crude drugs.

Class 160. Disinfectants; standardization of disinfectants; manufacture of disinfectants; drug preservation, drug sterilization, ampuls, etc.

Class 161. Acids, alkalies, salts and compounds of every kind. Chemical elements derived from their compounds and chemical compounds not otherwise classified.

Class 162. Refined sulphur and derivatives from sulphur.

Class 163. Equipment and processes used, and products obtained in the manufacture of phosphorus and matches.

Class 164. Drug adulteration; methods of adulteration; methods of detecting adulteration.

Class 165. Various products of chemical industries; tanning materials, waxes, essential oils,

glue and gelatine; perfumes, cosmetics and extracts; various glazes, printing ink, blacking.

Class 166. Transferred to Manufactures and Agriculture.

Class 167. Transferred to Mines and Metallurgy.

Class 168. Alcohols modified for industrial purposes.

Class 169. Equipment and appliances for producing calcium carbide, and for the storage of acetylene gas.

Class 170. Insecticides; fungicides; parasiticides and methods of manufacture and use.

Class 171. Pyrotechnics, bombs, signals, etc.

GROUP 37

MUSICAL INSTRUMENTS

In Group 37, Musical Instruments--materials, processes and products, covering ten classes, there were letters sent out on May 31, 1918, to concerns representing the following classes:

Class 172. Materials and processes for manufacturing musical instruments.

Class 173. Wind instruments of metal or wood, having openings with or without keys, simple mouth pieces, pipes or reeds, with or without reservoir of air.

Class 174. Metal wind instruments, plain or with lengthening pieces, slides, pistons, keys or reeds.

Class 175. Wind instruments with key-board; organs,

accordions, etc.

Class 176. Stringed instruments without key-board, played with the fingers or with a bow.

Class 177. Pianos, player pianos, and other stringed instruments with key-board.

Class 178. Instruments played by percussion or friction; drums and cymbals.

Class 179. Automatic instruments; barrel organs, bird organs, musical boxes, piano and organ players, bandonions, orchestrions, etc.

Class 180. Phonographs, talking machines, graphophones and similar devices.

Class 181. Separate parts of musical instruments and orchestral appliances; strings for musical instruments.

GROUP 38

THEATRICAL APPLIANCES AND EQUIPMENT

In Group 38, *Theatrical Appliances and Equipment*, covering six classes, there were one hundred eighteen letters sent out May 21, 1913, to concerns representing the following classes:

Class 182. Interior equipment and special furniture for theaters.

Class 183. Arrangements for preventing and extinguishing fires.

Class 184. Scenery; curtains, metallic curtains, gauzes, nets; colors, brushes, palettes,

cordage; special iron work; lighting; electrical apparatus, candelabra, colored screens, apparatus for imitating flame, smoke, lightning, fireworks; projections; spectres; phosphoresence.

Class 185. Machinery; windlasses, drums, chests, traveling platforms, slides, trolleys, traps, counterweights, flies.

Class 186. Costumes; special materials, printing on different materials, armor; jewelry; foot-gear; dancing shoes; wigs, beards, make-up; paints for making up.

Class 187. Properties for the imitation of various phenomena, such as thunder, hail, wind, snow, gun-firing; card-board work of all kinds; furniture made in perspective.

GROUP 39

ELECTRICAL METHODS OF COMMUNICATION

In Group 39, Electrical Methods of Communication, covering two classes, there were one hundred five letters sent out April 15, 1913, to concerns representing the following classes:

Class 188. Telephone, telegraph and wireless instruments, dictographs, devices for the deaf, etc.; their apparatus and specific equipment.

Class 189. Fire alarm systems and equipment; police signals and patrol box systems and equipment; electric annunciators and other electric signal apparatus not classified.

GROUP 40

CIVIL AND MILITARY ENGINEERING

In Group 40, Civil and Military Engineering,

there were seven hundred thirty-two letters sent out on June 20, 1913, to concerns representing the following classes:

Class 190. Transferred to Mines and Metallurgy.

Class 191. Methods of testing structural materials, and apparatus used therefor.

Class 192. Transferred to Class 215.

Class 193. Methods used in earth work, such as the construction of canals, railroads, levees, embankments, etc.

Class 194. Equipment and methods for the construction and maintenance of roads, streets, promenades and highways.

Class 195. Equipment for and methods used for preparing foundations; piles, pile-drivers, screw-piles, pneumatic apparatus, caissons, diving apparatus, wire trams, etc.

Class 196. Passenger elevators, pneumatic tubes, etc.

Class 197. Military defenses and accessories; engineering material employed in the operation of an army.

Class 198. Transferred to Classes 197 and 532.

Class 199. Equipment for and methods used in storing and distributing water.

Class 200. Equipment for and methods of city sanitation.

GROUP 41

MODELS, PLANS AND DESIGNS FOR PUBLIC WORKS

In Group 41, _Models, Plans and Designs for_

Public Works, there were three hundred twenty-three letters sent out on June 20, 1913, to concerns representing the following classes:

Class 201. Roads and other public highways. Construction and maintenance of streets in cities.

Class 202. Inland navigation; improvement of rivers, construction of canals, dams, locks, lifts, ship railways, reservoirs, spillways and feeders; dredges, pile sinkers, pile drivers, current deflectors, scraping and water-jet devices for removing sand-bars, etc.; pumping stations, mechanical towing and warping; equipment used for the development of river ports.

Class 203. Sea ports (general arrangements); piers, docks, jetties, basins; equipment for development (not including shipping).

Class 204. Bridges and viaducts; railway, road and foot bridges.

Class 205. Maritime canals.

Class 206. Protection against flooding by rivers or by sea; levees, dikes and sea walls.

Class 207. Railways as regards plan and profile of the line, and engineering works, subways, elevated lines, tunnels.

Class 208. Statistics, maps and publications relative to public works; transactions and other features pertaining to engineering societies.

GROUP 42

ARCHITECTURE

In Group 42, Architecture, letters were sent to concerns representing the following classes:

Class 209. Drawings, models and photographs of completed buildings.

Class 210. Drawings, models and photographs of artistic architectural details.

Class 211. Designs for mosaics and for mosaic and leaded glass.

GROUP 43

ARCHITECTURAL ENGINEERING

In Group 43, Architectural Engineering, there were five hundred ninety-seven letters sent out on July 21, 1913, to concerns representing the following classes:

Class 212. Models and working plans of public and commercial buildings, large and small dwelling houses, flats, apartment houses, and other architectural structures.

Class 213. Models, detail drawings and specifications for foundations, walls, partitions, floors, roofs and stairways, wood and metal framing, etc.

Class 214. Designs and models of special contrivances for safety, comfort, and convenience in the operation of moving stairways, doors, windows, house signals, fire escapes, ventilators, etc.

Class 215. Working plans for the trades, mason, carpenter, etc., connected with building construction; designs and models of bonds, arches, coping, vaulting, etc.; plastering and construction of partitions.

The following letter was sent to one hundred

thirty trade organizations in the United States on June 16, 1913:

> "I take pleasure in informing you that a letter is now being sent by me to the principal manufacturers of the United States, in the various industries and professions covered by the Exhibit Groups classified under the Department of Liberal Arts, inviting their participation in this Exposition. Attached hereto is an explanatory summary of these fifteen Groups which contain one hundred and twenty-one Classes.
>
> "In this invitation we are emphasizing the national character and international significance of the 1915 Exposition, as well as the splendid opportunity afforded these manufacturers for a comprehensive display of their products and processes, in which live, working exhibits would prove especially interesting and attractive.
>
> "I have also dwelt upon the fact that the exhibits at this Exposition must be SELECTIVE in character, because of the comparative limitation of space, due to the world's more extended productivity and the wider participation than at previous Expositions. In view of this situation, and as there is no charge for exhibit space, I have suggested the advisability of filing applications for space as soon as possible.
>
> "Although the rules of the PANAMA-PACIFIC INTERNATIONAL EXPOSITION confine these applications from the various industries to MANUFACTURERS ONLY, we would appreciate your active co-operation towards inducing thoroughly representative displays in the Department of Liberal Arts.
>
> "This communication is addressed to you therefore for the purpose of enlisting your valued influence with your correspondents, or those with whom your organization comes into contact in the industries indicated, to be suitably represented at this great celebration of the opening of the Panama Canal -- an event that means the inauguration and development of entirely new and profitable avenues of commerce, the

extent of which it is impossible to overestimate.

"As patriotic Americans, imbued with a keen desire to promote the welfare of the important American industries designated, and as public-spirited citizens who wish to aid in every possible way the success of this national celebration, I trust that we may count upon your best efforts in the direction indicated.

Yours very truly,

(Signed) Theodore Hardee

Chief of Liberal Arts."

With a few slight changes the above letter was also sent to four hundred fourteen local houses representing eastern concerns on June 16, 1913.

The following letter was sent on June 7, 1913, to one hundred forty-seven medical journals, thirty musical instrument journals, six paper manufacturing journals, three instruments of precision journals and thirty-six electrical methods of communication journals:

"At the suggestion of our Director of Exhibits, I beg to hand you herewith copy of a press clipping announcing my appointment as Chief of the Department of Liberal Arts for the Panama-Pacific International Exposition.

"To stimulate further interest among your readers, who may be prospective exhibitors at this Exposition, we would appreciate the courtesy of an early mention by you of this appointment.

"We are also enclosing copy of a form of letter that is being sent by me to the various industries and professions classified under the Department of Liberal Arts, inviting their participation in

the Exposition.

"Hoping for your valued interest and co-operation, I am

Very truly yours,

(Signed) Theodore Hardee

Chief of Liberal Arts."

The following letter was sent to all enquirers about space, etc.:

"Replying to your recent favor, I beg to advise that according to the Official Classification of this Exposition your product belongs to the Department of Liberal Arts under (Group number and title).

"I take pleasure, therefore, in handing you herewith a blank application for space. Kindly fill this in and return it to me as soon as possible. Upon receipt it will be duly registered and you will then have become an applicant of record for allotment and location of space as soon as that stage of the work is reached. This will occur after we have waited a reasonable length of time for receipt of all responses to our invitation to participate.

"Inasmuch as this Department provides, without charge, attractive housing and exhibit space, ample fire and police protection, the opportunity to secure valuable awards by the International Jury and other highly desirable publicity benefits, as well as an immense audience drawn from the four quarters of the globe during the nine and one half months of the Exposition period, exhibitors are not permitted to choose locations but must install their displays in the space allotted by the Chief of the Department, for the best general results. Please rest assured that we shall endeavor to meet your requirements as far as conditions permit.

"Under separate cover I am sending you some Exposition literature that will give you additional information.

Yours very truly,

(Signed) Theodore Hardee

Chief of Liberal Arts."

The following letter was sent to prospective exhibitors on December 13, 1913:

"Supplementing our invitation to take part in this Universal Exposition at San Francisco, from February 20th to December 4th, 1915, to celebrate the opening of the Panama Canal, I beg to advise that according to the official classification of exhibits your product is classed under Group   in our Department of Liberal Arts. An analysis of this group will be found on page   in the enclosed grey covered circular No. 2.

"If you are desirous of building up your Export trade to foreign countries you will find in this great International Exposition an unparalleled opportunity to bring your products to the attention of the buyers of all nations in a quicker, more economical and effective manner than any other way at your command. The chief value of such a display will be through the reports sent back to their home governments by experts attached to the Foreign Commissions who will carefully inspect, study and compare the quality and prices of all products exhibited and the Jury awards received by the manufacturers and producers of each country. This authentic data will be disseminated by the Ministries of Industry and Commerce to their commercial organizations which, in turn, will get it into the hands of their members for information and guidance in buying and selling to the best possible advantage in the world's markets.

"It should therefore be borne in mind that exhibiting at San Francisco in 1915 means placing your

product most advantageously before discriminating buyers of the whole world in general and the Pacific area in particular. The Pacific area comprises a field of unlimited possibilities and resources, embracing the twelve nations forming the western coast of South and Central America, Australasia, Japan and China, Russian Asia, Alaska and western Canada, as well as the extremely rich and rapidly growing Pacific Slope of the United States. Here representatives of all these countries most directly affected by the opening of the Panama Canal will gather in 1915 to investigate the markets of the world and consider questions concerning the exchange of natural commodities and manufactured products under the new conditions when ships can pass in one day from the Atlantic to the Pacific Oceans.

"The United States Government has constructed the Panama Canal at an expenditure of four hundred millions of dollars, as much for the benefit of every other country in the world as for its own people.

"Following this same splendid example the citizens of the State of California have public-spiritedly raised among themselves a fund of Twenty millions of dollars to provide ample ways and means for our Federal Government to fittingly celebrate this remarkable national achievement, through the medium of an Universal Exhibition at San Francisco in 1915 where representatives of all the nations can assemble with displays of their best and latest products and resources.

"It is only fair and reasonable therefore to expect that the leading industries of the United States will patriotically join in helping to make this important national celebration the unqualified success its international significance merits. It is hoped that they will approach this matter in the same broad and liberal spirit that actuated the people of the United States in assuming the responsibility and task of building this wonderful waterway which provides shipping with a new trade route that will revolutionize the commerce of the world.

"Even if some American manufacturers should not see immediate or direct benefit to themselves

by taking part in this remarkable Exposition of the world's progress, pride of industry at least should prompt them to make an exhibit that will help to maintain the prestige of American production as compared with what will be shown by the numerous foreign participants on this memorable occasion.

"In view of the limited space at our disposal, and the unprecedented demand for it, the exhibits must be carefully selected. Only the most representative and meritorious will be accepted,- our aim being quality rather than quantity. Under these circumstances it is a privilege to be allowed to exhibit at the Universal Exhibition of 1915.

"There will be no charge for exhibit space, which, however, can be granted only to manufacturers or producers. Please bear in mind that space in the Palace of Liberal Arts will be allotted when sufficient number of applications have been received to warrant closing the lists. Then the space will be allotted only to those who have applications on file in this Department. I earnestly hope therefore that you will reach a favorable decision at an early date and promptly return the enclosed form of printed application duly filled out and signed. This will serve as an estimate of the amount of space you deem necessary to make a suitable display of your product and will be given due consideration when exhibit space is being allotted.

"Hoping for an early and favorable reply, I remain

Very truly yours,

(Signed) Theodore Hardee

Chief of Liberal Arts."

The following letter was sent out on June 13, 1914, to State Commissions:

"Under our Classification of Exhibits the equipment, processes and products of "Civil and Military Engineering", and "Models, Plans and Designs for

Public Works", form Exhibit groups Nos. 40 and 41 respectively in the Department of Liberal Arts. These groups are divided into classes as per attached list, which is taken from our official handbook of classification.

"I would be glad, therefore, to entertain applications from your State, County and Municipal authorities for floor space in the Palace of Liberal Arts, to make displays of anything along these lines of which your State is especially proud and which you think might prove particularly interesting to the public at large. If these authorities are not in position to make the suggested exhibits, perhaps you will see fit to exert your valued influence to induce suitable displays by private corporations or individuals in your Commonwealth.

"While there is no charge for floor space, exhibitors are required to erect suitable booths at their own expense and likewise defray the cost of transportation, installation and maintenance of their exhibits.

"I am likewise enclosing a summary of the fifteen exhibit groups of the Department of Liberal Arts. If the manufacturers of your State particularly excel in any of these industries I would be happy to entertain their applications also.

"The space at my disposal is very limited and the demands are unprecedentedly heavy. Permit me, therefore, to emphasize the importance of filing applications for space without delay. As I expect to commence the allotments at an early date, this will enable me to give full consideration to all requirements and endeavor to provide for them as far as conditions permit.

"Hoping to be favored with your valued cooperation, and assuring you of my hearty appreciation, I remain

Very truly yours,

(Signed) Theodore Hardee

Chief of Liberal Arts."

The following letter was sent out on February 20, 1914, to eleven hundred manufacturers, which took in all Liberal Arts groups with the exception of Group 33 (covered by special letter), Group 37 (this same letter was sent to manufacturers represented by Sherman, Clay & Co., and Wiley B. Allen Company, with additional paragraphs added to suit each case) and Group 42 (awaiting decision American Institute of Architects). This letter was not sent to paper manufacturers, paper mills, or any manufacturers in Group 32.

"Your attention has been previously invited to the Universal Exposition which opens at San Francisco on February 20, 1915, to celebrate the opening of the Panama Canal. The unusual interest displayed on every hand and the lavish preparations being made give ample assurance that this national celebration will excel all of its predecessors in quality, scope and international significance.

"Owing to the unprecedented demand, the preliminary allotment of exhibit space in the Department of Liberal Arts will probably be commenced at an early date, and only those applications actually on file will be considered in making these allotments. Should your application be received later you would have to take chances on being accomodated with such space as might be left.

"EXHIBIT SPACE WILL BE FREE, but exhibitors are required to erect suitable booths and install exhibits at their own expense, as well as to defray the cost of transportation and maintenance.

"Please bear in mind that the time is growing short for exhibitors to prepare and install their displays. Before next Fall the Palace of Liberal Arts

will be ready to receive exhibits, and only a few months later the Exposition gates will be formally opened to the public--February 20, 1915, for a period of nine and one-half months ending December 4th of that year.

"We desire to have represented the best that our own country affords in order that American exhibits may compare favorably with those from foreign countries. It is important, therefore, that domestic exhibitors should file their applications for space without delay. We wish to secure displays of the very best and latest types of machines, devices and products, illustrating the skill and ingenuity of the human race. Familiarity with your own product will doubtless suggest unique methods of presenting its essential features in the most impressive manner. Where full sized machines are impracticable, attractively constructed models may prove acceptable substitutes.

"The widespread interest manifested in the Panama Canal -- the greatest Engineering achievement in history -- which has contributed more than any other single event toward insuring our country's prestige and place in the front rank of nations, the unparalleled prosperity which will result from joining the Atlantic and the Pacific Oceans by the Panama Canal, and the patriotic duty of all American citizens to do their share toward securing and maintaining the respect and admiration of the world for the United States in this peaceful rivalry of nations, all warrant the expectation that our leading manufacturers will make prompt and liberal response to this invitation. Many have already done so and we trust that you also will take advantage of the splendid opportunity afforded.

"I am enclosing two circulars issued by the Department of Liberal Arts, in which will be found the Official Classification of Exhibits in your special line of business, with a description of the plan and scope of the Exposition in general and this Department in particular.

"If you wish to take part kindly signify your intention by writing to me for a printed form of application. This blank will be promptly forwarded and when it is received from you properly filled out

it will be duly acknowledged. You will then have become an applicant of record and entitled to consideration when the time comes for allotment of space.

"Hoping to receive an early and favorable reply, and assuring you of my heartiest cooperation, I am

Yours very truly,

(Signed) Theodore Hardee

Chief of Liberal Arts."

The following letter was sent on March 7, 1913, to the leading pipe-organ manufacturers in the United States, together with blue prints of Festival Hall:

"Music of the loftiest and most refined character will form an especially brilliant feature of this great world's Exposition to be held at San Francisco in 1915. Famous artists will take part in the inspiring musical festivals held, chief among whom will be the most prominent organists from every quarter of the globe.

"Music lovers recognize the PIPE-ORGAN to be the only real medium by which the whole wide range of grand music can be thoroughly demonstrated. It is manifestly essential, therefore, that FESTIVAL HALL -- the scene of these notable international gatherings on the Exposition Grounds -- should be equipped with a Pipe-Organ thoroughly suitable to the general requirements of such important occasions, and particularly for the special organ recitals by the many celebrated organists who will be eager to perform on so magnificent an instrument under such favorable auspices.

"As the duly authorized Exposition official having this matter in charge, I take pleasure in inviting you to afford us the benefit of your views as

to what you consider would be the most appropriate character of PIPE-ORGAN to install in FESTIVAL HALL for these purposes.

"We feel at liberty to ask your opinion because of the well established reputation you enjoy as a leading manufacturer of high-grade organs. We believe that in giving us this advice you will be actuated by the patriotic desire to help make this national celebration a complete success through insuring the selecting of a PIPE-ORGAN that will reflect the greatest possible credit upon both the Exposition and the great industry you represent.

"To acquaint you more fully with our needs, I am sending you under separate cover a diagram of the interior of FESTIVAL HALL, showing the seating capacity, acoustical arrangements, size of stage, space for organ, and all other dimensions and details necessary. Just what the woodwork, finish and decorations of the interior of Festival Hall will be is not yet determined.

"The following brief summary of the plan and scope of the PANAMA-PACIFIC INTERNATIONAL EXPOSITION will acquaint you with its broad character and high purpose:

"By authority of Congress, the President of the United States has invited the governments and peoples of all countries to take part in this important celebration. Already twenty-six nations and thirty-five States of this Union have accepted the invitation. The substantial response at this early date insures an international Exposition of unprecedented brilliancy and success.

"The interest manifested in all quarters is increasing daily and will be accentuated during the entire nine months of the Exposition period, commencing February 20 and ending December 4, 1915.

"This very important national undertaking will be of international significance because of the remarkable event it celebrates and the fact that it will be a symposium of all the world's best products in art, literature, science and industry, showing the

culture and development of the human race--particularly within the contemporary period of 1905 to 1915.

"Processes will be an especial feature, as live, working exhibits will be operated wherever practicable. Though thoroughly comprehensive in classification, all exhibits will be SELECTIVE--the aim and test being quality rather than quantity.

"As soon as practicable after receipt of these data, we would very much appreciate the courtesy of a reply, addressed to me, fully setting forth your ideas as to what style, character and size of organ would be the most effective and desirable to meet all the requirements designated. We should like to have you specify the number and composition of the registers or stops you propose, the kind of wood and decorations for the case, how far the console or keyboard should be located from the organ, and all other particulars; also whether you deem it advisable for this instrument to be a "Self-Playing" Organ as well, and if an Echo Organ would likewise prove desirable as an auxiliary. Please feel perfectly free to make any suggestions that you may see fit to offer, bearing in mind that our interests in this matter are in a broad way practically mutual.

"It is our desire, in short, to secure the very finest PIPE-ORGAN obtainable, one that will prove not only a source of justifiable pride to both the producer and the Exposition, but also a joy to the thousands of visitors who will again and again see and admire so wonderful a product of human ingenuity and skill.

"Permit me to assure you that whatever you may write will be given the fullest consideration and treated in whatever measure of confidence it may be your pleasure to indicate. It may interest you to know that the instrument finally selected will be recognized and designated as the official PIPE-ORGAN, and it must therefore be on a par with all the other splendid objects displayed at this great Universal Exposition in 1915. We want this Official Organ to be to the Music Instrument industry what the Panama Canal represents in Engineering -- the most wonderful achieve-

ment of the science it represents, the very highest type and expression of the builder's art and skill.

Thanking you in advance, and hoping to be favored with an early reply, I am

Very truly yours,

(Signed) Theodore Hardee

Chief of Liberal Arts."

The following letter was sent to the leading organ manufacturers on February 28, 1914:

"I beg to advise you that after careful investigation and consideration the Exposition management awarded a contract to the Austin Organ Company of Hartford, Connecticut, to furnish and install the pipe-organ desired for Festival Hall on the Exposition Grounds here in 1915.

"This instrument will consist of Great, Swell, Solo, Choir, Echo and Pedal organs, comprising 113 stops and four Consoles; height 77 feet, length 40 feet, depth 27 feet; operated by thirty-five horsepower motor.

"At the conclusion of the Exposition this organ will be installed in the million dollar Auditorium of the "Civic Centre", which forms the group of new Municipal buildings here. This Auditorium is being erected by the Exposition management to house the Congresses and Conventions which will be a part of the activities of the Exposition next year. The building, including the organ, will be presented to the city of San Francisco as a permanent memorial of the Panama-Pacific International Exposition.

"In conveying this information to you I wish to express this Department's high appreciation of the very generous and public-spirited manner in which you responded to our request for suggestions

as to the most suitable character and size of organ to install. I understand that the several committees having the selection in charge were materially aided by the data which you so kindly and promptly furnished through this office.

"Again thanking you for your courtesy and hoping that you will honor the Exposition with a visit next year and see for yourselves the result of our conclusions, I remain

Very truly yours,

(Signed) Theodore Hardee

Chief of Liberal Arts."

The following letter was sent on March 20, 1914, to those applying for space:

"Your application now on file here for exhibit space in the Department of Liberal Arts indicates your substantial interest in the Universal Exposition at San Francisco in 1915. I presume that you will be gratified to learn that this Department expects to commence allotting space in the month of May, and I take advantage of this occasion to reiterate our previous assurances that we shall endeavor to meet your requirements as far as conditions permit. The space available, however, is extremely limited by reason of the unprecedented interest and consequent very heavy demand from all quarters. I shall take pleasure in notifying you as soon as we have determined upon the space allotments.

"As this Department feels that the development of the closest possible relations with you will prove mutually advantageous, especially in the stimulation of a large attendance, we venture to ask your favorable consideration of one or both of the two following plans for exploitation purposes.

1. The publications in catalogues or trade periodicals used by you of a brief sketch of the scope

and principal features of the Exposition.

2. The enclosure in your daily mail of a small pamphlet containing information concerning the Exposition.

"We shall be pleased to supply you with all data needed in the first instance, and with pamphlets to be used as enclosures.

"Requesting the favor of an early reply, I am

Very truly yours,

(Signed) Theodore Hardee
Chief of Liberal Arts."

The letter quoted below followed the preceding communication after it was decided to accept the application.

"March 27, 1914.

"As I plan to commence the allotment of exhibit space in the Palace of Liberal Arts by the first of next May, I would be glad to receive your application on the printed form which was sent to you at your request on (date).

"If you decide to exhibit, please get this application into my hands before the end of April, in order that I may give it due consideration. You will understand, of course, that I cannot give any definite assurance now regarding space, but I will endeavor to accommodate you as far as conditions permit when allotments are made. To save delay, I enclose another copy of the application blank in case you have mislaid the printed form already sent.

"If no application is received from you by

May 1, 1914, I will assume that you have concluded not to participate.

"Hoping for an early and favorable reply, I remain

Yours very truly,

(Signed) Theodore Hardee

Chief of Liberal Arts."

On April 16, 1914, three hundred forty-six copies of the following letter were sent to prospective exhibitors classifying under the Photography Group:

"The Panama-Pacific International Exposition will display in a comprehensive manner the achievements and activities of mankind during the last decade. Notably interesting and significant among the exhibits will be the products of PHOTOGRAPHY which will be shown in a complete and characteristic manner in the Department of Liberal Arts. The most recent developments in photography, including moving or motion pictures, will attract much attention.

"The Photography group of exhibits must be housed in the Palace of Liberal Arts. They will be SELECTIVE in character because of the comparative limitation of space which, by reason of wider participation and the world's increased productivity, will be more restricted than at previous International Expositions.

"By reason of the national character of this celebration and the substantial interest manifested by both American exhibitors and Foreign Governments, an Exposition of the most representative international scope is assured at San Francisco in 1915. Latin America and the Orient will take very prominent parts. Thirty-five foreign countries have already accepted the invitation to participate extended by the President of the United States, and thirty-eight States

have likewise signified their intention to take part.

"Enclosed find Special Regulations and the Official Classification governing exhibits of Photography; also a sketch of the exhibit booth for this group in the Palace of Liberal Arts.

"The Palace of Liberal Arts will be ready to receive exhibits before this Fall, and only a few months later (February 20, 1915) the Exposition gates will be opened to the public. While exhibit space is free, the cost of booth construction, as well as the transportation, installation and maintenance of exhibits, must be defrayed by the exhibitor. We aim to commence the allotment of space in May, 1914, and only those applications on file will be considered.

"If you desire to exhibit please write without delay for Application Blank and further particulars which will be promptly furnished.

Yours very truly,

(Signed) Theodore Hardee

Chief of Liberal Arts."

The following letter was sent out on July 15, 1914, to leading architects:

"Under the Official Classification of Exhibits at this Exposition all drawings, models and photographs of completed buildings, artistic architectural details, landscape architecture and architectural engineering will form exhibit groups in the Department of Liberal Arts, which must be displayed in the Palace of Liberal Arts.

"This Department comprises fifteen groups, covering the applied sciences, in which the exhibits will be notably interesting and significant. As the advances in Architecture and Architectural Engineering have exercised a potent influence upon the improvement of conditions in economic life and the cul-

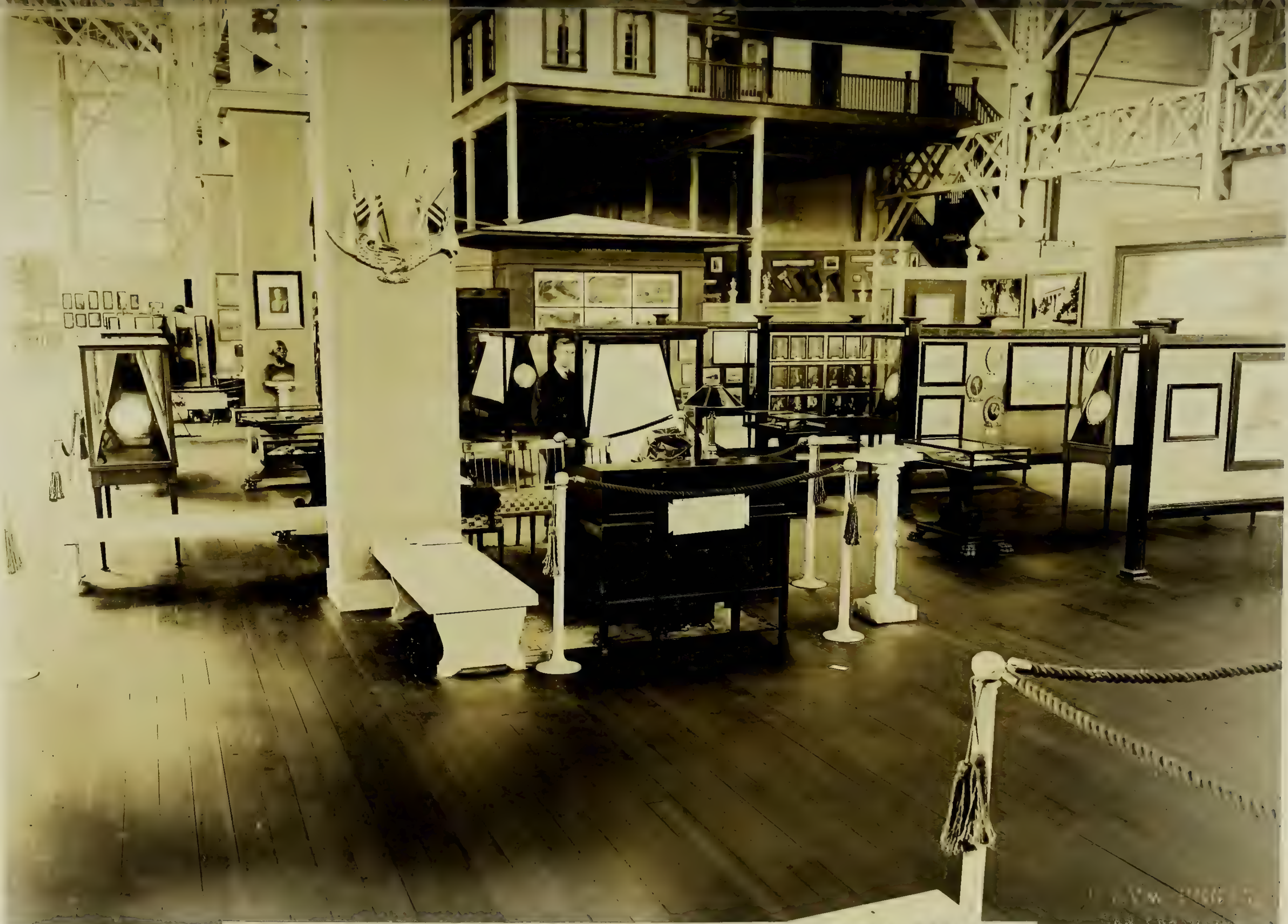
tivation of artistic taste, the exhibits portraying this progress in the United States should be especially complete and characteristic to uphold the prestige of American ideals and effort as compared with the displays of foreign countries in the Palace of Liberal Arts.

"The opening of the Panama Canal means the inauguration of a new and prosperous era by reason of the development of new avenues of commerce, and the Universal Exposition at San Francisco in 1915 will afford a rare opportunity to display the ideas and skill of American architects to the best possible advantage. The keen interest manifested by both American exhibitors and foreign governments assures an Exposition of the most representative international character. Thirty-six foreign countries have already accepted the invitation of the President of the United States to participate, and forty-two States have likewise signified their intention to take part.

"We should be glad to know without delay whether you wish to exhibit. All exhibits must of necessity be selective in character because of the comparative limitation of space which, by reason of wider participation and the world's more extended productivity, will be more restricted than at previous International Expositions. This will emphasize the advisability of applying immediately for exhibit space.

"While there is no charge for space, exhibitors are required to erect suitable booths and likewise defray the cost of transporting, installing and maintaining their own exhibits. As the exhibit buildings are now completed and ready for occupancy, the allotment of space will commence at an early date.

"All Chapters of the American Institute of Architects, as well as the Architectural Leagues of America and the Pacific Coast, and the Architectural Clubs in leading cities of the United States, have been invited to exhibit and to post a copy of this communication in their headquarters, or otherwise convey our invitation to their members to make exhibits, individually or collectively, at this Exposition. Blank applications for space, and other information



U. S. Department of State - Background Mezzanine Liberal
Arts Department Offices

prepared for the guidance of exhibitors, will be promptly forwarded upon request.

"I would appreciate the courtesy of a prompt acknowledgment of this communication, in order that I may gain some knowledge of your intentions and make due provision for your requirements if you should decide to exhibit.

"Hoping to be favored with an early reply, and assuring you of my heartiest cooperation, I am

Yours very truly,

(Signed) Theodore Hardee

Chief of Liberal Arts."

ICULTIES
OUNTERED.

The difficulties encountered in exploiting the Exposition during these first two years of the organization work can be best understood when it is known that in 1913 came the general tightening of the money market. This naturally resulted in retrenchment which lessened the great plans for participation we expected, but this was not all. In 1914, with times getting harder, came the dissolution of commercial relations between France and Germany; then the war itself was the climax, many of our best prospective exhibitors cancelling their exhibit space. Although this affected our foreign exhibitors to a greater extent than the domestic, it began to look as if the

Exposition would not fulfill its great promise. The times were heart-breaking. It was like starting over again, with the opening of the Exposition only a few short months away. The one alternative was to make greater efforts toward securing more of the domestic exhibitors. As a result of this forced campaign we secured some of the largest of our exhibitors.

In the meantime, preceding these strenuous times of anxiety it was the Department Chief's good fortune to be selected as one of the Commission Extraordinary to Europe, acting in the capacity of Executive Officer for the Commission. This Commission was appointed by the President of the United States to visit the countries of Europe and to support in person the invitation previously extended by him to all nations to participate in this celebration commemorating the completion and opening of the Panama Canal. The members of the Commission were: John Hays Hammond, Reuben Brooks Hale, Vice-President of the Exposition, William T. Sesnon, First Vice-President of the San Francisco Chamber of Commerce, Rear-Admiral Sidney A. Staunton, U. S. N., and Brigadier General Clarence R. Edwards, U. S. A.

The Commission sailed on April 24, 1912, visiting London, Berlin, St. Petersburg, Vienna, Budapest, Rome, Paris, Brussels, Lisbon, Madrid, Berne, Stockholm, Christiania, Copenhagen and the Hague. The Chief returned to America with Mr. Besnon early in July, 1912.

In the summer of 1913 the Chief of the Department was sent to Europe by the Exposition to assist the Director-in-Chief, Mr. F. J. V. Skiff, in foreign exploitation. The Chief bore credentials as "Commissioner to Europe" from Secretary of State William Jennings Bryan. He visited England, Germany, Austria-Hungary and Switzerland in the interests of the Exposition. Upon his return in October, 1913, he remained in the Eastern States several weeks visiting and interesting numerous prominent manufacturers in the Exposition. This was of great benefit and gave the Department the additional advantage of meeting prospective exhibitors at first hand.

EXHIBIT SPACE

To further interest prospective exhibitors and to hurry along the installation work the Department sent out the following communication, describing in

detail the necessary requirements regarding space:

"Referring to our previous correspondence, I beg to advise that this Department is now allotting space in the Palace of Liberal Arts and would be glad to give prompt consideration to your requirements. Please therefore let me hear from you at once upon this subject.

"There is no charge for floor space. You would, however, be required to erect a suitable booth at your own expense and likewise defray the cost of transporting, installing and maintaining your display. If you desire selling privileges they can be obtained by applying to the Director of Concessions, after space has been alotted to you by the Department of Liberal Arts.

"The Exposition will not be postponed, but will positively open at the time originally scheduled -- February 20, 1915. The Exhibit Palaces are finished and installation of exhibits has already commenced on a substantial scale. The remainder of the work is practically 95 per cent completed.

"Experts from all quarters predict that attendance at the Exposition will be materially increased by reason of the European War. Nine European nations have given definite assurance that they will take part, despite the war. Eighteen Latin-American countries, as well as Canada, Australia, New Zealand, Japan, China, Siam and Persia have also made arrangements to participate. Forty-four States of the Union are busily engaged in erecting special buildings and preparing exhibits. Two hundred and ninety national and international Congresses and Conventions will meet at San Francisco during the Exposition period. Please be on the lookout for the handsome 'Hercules' pamphlet I am sending, which gives a reasonably good idea of what this great Exposition represents and will look like when opened four months hence.

"As the space at my disposal is very limited, it would be advisable for you to let me know without delay just what floor area you need, and the dimensions. If you still have the printed application blank

sent some time ago, please fill it out and forward to me; otherwise, wire or write at once how many square feet of space you require, with aisle frontage and depth. I will then send you the necessary blank form and meanwhile will be in position to deal intelligently with your requirements.

"Hoping to be favored with an early reply, I remain,

Very truly yours,

(Signed) Theodore Hardee

Chief of Liberal Arts."

After the applications for space began to arrive and we were sure of filling all empty space, we began to arrange plans for the exhibitors, locating them to satisfy the requirements of the Liberal Arts Palace. The plan for erecting booths to meet a uniform construction was submitted to each applicant on blue prints, copy of which is to be found in folio.

Although the Palace of Liberal Arts was of great area, and proportionately high, to meet the need of the exhibitors, the amount of exhibits we had classified under this Department could have filled a much larger building. Even after the Exposition had opened there were a great many more who would have exhibited had we had room, and which were refused for that reason.

ESCRIPTION
OF
UILDING

The Palace of Liberal Arts was five hundred eighty-five feet long by four hundred seventy feet wide, with walls fifty-five feet high and a floor area of approximately 341,000 square feet, covering nearly six acres of ground. The main front of the building faced the South Gardens, the west end the Court of Palms and the Court of Four Seasons, while the northerly wall was divided from the Palace of Agriculture by a garden of wild flowers and shrubbery connecting the Court of Four Seasons with the grand central Court of the Universe, which, with its wide approach from the lofty Tower of Jewels opposite the main entrance to the Exposition Grounds, formed the northerly and easterly boundary of the Palace of Liberal Arts. The Dome in the center of the Palace was one hundred sixty feet from the floor, while the southwest corner of the building was ornamented by an Italian Tower reaching up more than one hundred ninety-five feet in the air. There were four large main entrances to the Palace, with eight smaller ones leading in and out on the sides of the building, making it easily accessible to the general public.

The Aisles of the Palace were designated as avenues (by letters) running east and west, and as

streets (by numbers) from north to south. All exhibits were thus readily located by reference to the Official Catalog for this Department, standing on easels at all the main entrances. This was a great convenience and assistance to visitors.

ECTIONAL
STALLA-
TION

The general scheme for installation of exhibits in the Palace of Liberal Arts provided for location of commercial and scientific exhibits from the United States in "industrial" groups corresponding to the Official Classification for this Department. The Foreign exhibits were located in groups according to their respective nationalities. The Domestic Section occupied the entire southern half and the upper portion of the northeastern quarter of the Palace. The Foreign Groups were located in the northeastern quarter. The whole northwest quarter was devoted to the United States Government exhibits.

Owing to limitation of space in the Palace of Liberal Arts, the exhibits of Printing Presses, their processes, and kindred equipment, Road Rollers and similar heavy products of the Liberal Arts classification were installed in the northeast corner of the Palace of Machinery, where a "Liberal Arts Section" was established for this purpose. While these exhibits were not displayed in the Palace of Liberal

Arts, they were listed in the Official Catalog as exhibits of Liberal Arts and were subject to review as such by the International Jury on Awards for the Department of Liberal Arts.

The three groups composing the Graphic Arts, consisting of typography, books and publications and maps, occupied three blocks just south of Avenue "C" in the southwestern corner and one block in the northeastern quarter of the Liberal Arts Palace. Adjoining the Graphic Arts were the Medical and Surgical exhibits, and next came the Musical Instruments. Photography covered the two blocks along the southern wall directly opposite.

On the eastern side of Fifth Street, below Avenue "C", the Instruments of Precision and Electrical Methods of Communication exhibits occupied the first three blocks and opposite, along the south wall, was the Engineering group. The Chemical and Pharmacal group followed in the next three blocks. Theatrical Equipment was shown along the southeast wall.

Adjoining the main east entrance to Avenue "C" was a small block containing an important "working exhibit" which formed the central Fire Alarm and Police Signal station for the entire Exposition.

The Domestic Architectural displays were in the northeastern part of the Foreign Section.

As a matter of accommodation, and for other important reasons, many exhibits classified as Liberal Arts were to be found installed in other exhibit palaces, the Exposition Hospital, and elsewhere on the Exposition grounds. A number were in use by the Exposition management, as "working exhibits", throughout its administrative offices. The immense Pipe Organ in Festival Hall was a "working exhibit" of the Musical Instrument group. The Garbage and Refuse Disposal Plant at the extreme western end of the Exposition grounds, and the great "Panama Canal" concession on the "Zone", were both "working exhibits" in the Civil and Military Engineering group of this Department.

In the extreme southeast corner of the building were located the public service booths for Telephoning, Telegraphing and Typewriting.

Under the dome in the center of the palace was a great Telescope, with a 20-inch lens and forty feet long, emblematic of the Applied Sciences which the Department of Liberal Arts represents.

IGHT,
OWER
and
ATER

The light, power, water and sewage systems were all conveniently located and were contracted for by exhibitors when required from the Electrical Department and Division of Works. The fire and police protection was of the best. The headquarters for the signal station for fire and police were located, as working exhibits, in the Palace of Liberal Arts.

Although there were not many live or machinery working exhibits, those which were running were of the most delicate and particular operation. The Liberal Arts was one of the palaces where it was requested that no loud working exhibits of any kind should be allowed.

ACE CAN-
ELLED BY
REIGN AND
MESTIC
XHIBITORS

The greatest disappointment of the pre-Exposition period and of our very successful organization was the cancellation of space brought about by the war. This would have proved most disastrous had it not been for the possibility of securing domestic exhibitors, which has been mentioned above. In the Liberal Arts Palace alone we cancelled of the domestic exhibitors 39,590 square feet of exhibit space and of the foreign 57,583 square feet of space, totaling in the Liberal

Arts Palace 97,173 square feet of space cancelled. In Machinery Palace we cancelled 8,638 square feet for domestic exhibitors, with no foreign, a grand total of 105,811 square feet of space cancelled under our classification.

The time of cancellation began about August 1, 1914, and continued until December 25, 1914, inclusive, but, with renewed energy, knowing that the opening of the Exposition was only a short two months away, the Department put forth greater effort with more literature, and went after many of the exhibitors who had already notified us that they could not exhibit at the Exposition. The fact that we had all the space promised to various exhibitors on the opening day was evidence that the Department made great strides in filling the space, even in spite of the war handicap, although the space which was cancelled by the foreign exhibitors was proportionately larger in comparison to the domestic as they were only provided with a quarter section of the Palace in the beginning

A week prior to the opening, February 11th, Mr. H. W. Kerrigan became identified with the Department as General Superintendent under the instructions

of the Chief, occupying his desk, the Chief having been called to assist the President with Special Events.

PACKAGES AND CASES RECEIVED

It was almost impossible to compute the number of pounds or tons this Department received in exhibits, but we do know from statistics secured from the Traffic Department that up to and including July 21, 1915, the following packages, cases, etc., had been received for the Liberal Arts Palace:

Freight,- rail and water	4,016
Express	998

The number of exhibits and booths fully and partly completed on February 20, 1915, is stated in the following chapter.

INSTALLATION OF EXHIBITS

As a natural sequence to the completion of booths began the installation of exhibits. Anticipating the rush and hurry to finish at the last moment we made every effort to eliminate trouble and unnecessary work by forcing each exhibitor to finish his booth a week prior to opening day instead of by that day. Evidenced by the fact that we were ready on February 20th, it was obvious that our plans were more suc-

cessful than had we given them until the 20th to finish.

During this strenuous week the rush of office work naturally was double, taking the time to answer telegrams and voluminous correspondence, which occupied a great part of the Department officer's work, but in this, fortunately, he had the assistance of a capable secretary and competent office force, which gave him more time to supervise the installation of exhibits.

People whom we had depended upon disappointed us in many cases. Anxious to be on time, and at least as far advanced as any other Department, we put forth every effort. Unavoidable weather conditions to some extent prevented exhibitors and contractors from finishing as they had anticipated. Contractors, literally swamped with contracts, tried to finish on time, but could not for the reason that they had taken too much work and were unable to handle same. However, this they should have expected at the last moment and should have made better provision to meet the conditions.

The Exhibitors, on the other hand, with packing cases piling up, rubbish accumulating and lumber scattered around in booths and aisles, found it im-

possible to rush the work.

One of the facts which was against us during this last week was the giving up of space by exhibitors, both foreign and domestic, which made it doubly hard and gave no end of last minute detail. I might say at this time that the Traffic Department performed yeoman service and was most efficient in cooperating with us.

It was almost impossible to get emergency men, although labor was plentiful. The office force was rushed, the floor superintendents were forced to their last resource, and every exhibitor was clamoring to get recognition from the Department for shipments, electricity, water, telephone and other connections, which were necessary for opening day.

For ten days preceding the opening the floor superintendents worked nights and days. The night before the entire force was up all night, but we were able to say on February 20th that we were further advanced, perhaps, than any other Department. This we were told by the various contractors, men from the Departments of Works, and others who were capable of judging during this last strenuous week.

PERCENTAGE OF BOOTHS COMPLETED AND EXHIBITS INSTALLED, FEBRUARY 20, 1915.

Exhibitor.	Percentage Booth	Percentage Exhibit	Square Feet
American Automatic Press Co.	90	50	150
Aero Fire Alarm Co.	100	100	322
American Druggist Syndicate	100	100	1180
American Telephone & Telegraph Co.	100	100	3615
Ansco Company	100	90	300
Anti-Uric Company	90	95	183
Aunger Articicial Limb Co.	100	100	211
Automatic Machine & Tool Co.	100	100	175
Austin Western Road Mchy. Co.	100	100	5983
Argentina	75	10	3393
Bausch & Lomb Optical Co.	100	100	1178
Broadway Park Plate Co.	100	100	320
Burroughs Adding Machine Co.	100	100	1305
Blair-Murdoch Company	90	50	315
Brown Barotype Co.	85	00	204
B.J.S. Cahill	95	55	236
California Highway Commission	25	00	786
California Perfume Company	100	00	586
Campbell Electric Company	100	100	332
Cantin, Alexander A.	75	00	143
Carnes Artificial Limb Co.	100	100	211
Cary & Sons, E. H.	100	00	171
Channel Chemical Company	100	100	202
Cheney Talking Machine Co.	100	95	1727
Chicago Artificial Limb Co.	100	100	211
Chronicle Publishing Co.	100	100	625
Coin Machine Manfg. Co.	100	00	446
Columbia Graphophone Co.	100	100	3143
Columbus Dental Manfg. Co.	100	100	604
Conn, C. G., Inc.	100	75	489
Conway, Miss Jessie B. - M.D.	100	100	282
Corona Typewriter Company	100	100	214
Crocker Co., H.S.	100	100	634
China	100	97	2782
Clayes, Miss Margaret	100	100	288
Craig Dental Company	100	00	
Dalton Adding Machine Co.	100	100	561
Dentists Supply Company	100	100	373
DeForest Radio Telegraph and Telephone Company	100	100	612

Exhibitors	Percentage Booth	Percentage Exhibit	Square Feet
Division of Works (Stenographer)	50	00	100
Drucker Co., August E.	100	100	139
Chiris, Antonie Co.	75	00	325
Coin Booth, Farran Zerbe	100	75	777
California Gem Company	100	00	770
California Redwood Burl Co.	90	00	475
Eastman Kodak Company	100	100	2528
Eilers Collective Exhibit	100	60	7257
Elder, Paul Co.	85	00	379
Emerson Drug Company	100	100	175
Encyclopedia Britannica	100	100	559
Egry Register Company	100	100	306
Felt Tarrant Manf. Co.	100	100	401
Fitch Co., F. W.	100	100	139
Funk & Wagnalls Company	100	100	221
Germany	90	00	4934
Galleazzi, J.	100	00	249
Gem Ear Phone Company	100	100	540
General Acoustics Co.	75	00	1323
Globe Ear Phone Company	100	100	294
Gnu Sales Corporation	100	100	722
Grolier Society,	100	100	620
Gurley, W. & L. E. Co.	100	100	411
Henderson, [illegible]. D.	75	00	318
Hearst, W. R.	100	100	5185
Harvard Company,	100	90	455
Hoffman, Geo. [illegible]. & Co.	100	100	278
Hopkins, Kathryn	80	00	346
Howell, John	100	100	443
Hall Co., Norman F.	100	100	299
Italy	25	00	5071
Johnson & Johnson,	100	85	934
Japan	100	100	3570
Kumalae, Jonah	100	100	415
Keuffel & Esser Co.	100	100	1600
Lietz Co., A.	100	100	606
Laughlin Fruit Refining Co.	75	00	1649
Lisenby Manfg. Co.	100	95	613
Langston Monotype Machine Co.	100	100	622
Marchant Calculating Machine Co.	100	100	631
Mareon Co.	100	100	249
Marks Co., A. A.	100	100	211
Mastermind Publishing Company	100	100	204
Mauzy, Byron	100	100	138
Martin Band Instrument Co.,	100	00	171

Exhibitor.	Percentage Booth	Percentage Exhibit	Square Feet
Merriam Co., G. & C.	100	100	221
Methodist Book Concern	100	100	873
Modesta Chamber of Commerce	95	00	493
Munder Co., Norman T.A.	100	100	232
Mergenthaler Linotype Co.	100	100	750
Municipal Engineering & Construction Co.	90	75	1086
National Cash Register Co.	100	100	2565
Netherlands	35	00	3390
Marriott Co., [illegible].	100	25	176
Ohio Chemical Company	100	100	266
Ohio Road Machine Co.	100	100	5984
Oakland Tribune	100	100	790
Owl Drug Company	15	00	615
Peerless Check Protecting Co.	75	00	408
Peterson, Mrs. Clara L.	90	85	268
Pictorial Photograph Booth	100	100	940
Plapao Laboratories, Inc.	00	00	40
Power Co., Nicholas	100	100	518
Pacific Press Publishing Co.	100	100	670
Portuguese Commission	25	00	777
Pierson Telegraph Transmitter Company	100	00	280
Radium-Therapy Corp.	100	100	296
Remington Typewriter Co.	100	100	1042
Rieger, Paul	100	100	399
Roseen Toilet Company	100	100	240
Randall Elevator Door Control Company	85	65	679
Reed Co., Geo. Russell	100	100	797
Sanitol Laboratory Co.	100	100	399
Schmidt Lithograph Company	100	100	1974
Schrader's Sons, Inc., A.	100	90	422
Scott-Miner Company	100	100	223
Secret of Beauty Mnfg. Co.	100	75	250
Sewell, [illegible]	100	100	407
Simplex Photo Products Co.	100	00	310
Sonora Phonograph Co.	100	100	1443
Sprague-Hathaway Co.	100	100	445
Star Electric Company	100	100	712
State Engineer & Surveyor of the State of New York	95	95	1906
Solvay Process Company	100	100	399
Stern, Joe	100	100	213
Stevens Inventions Company	100	00	316

	Percentage		
Exhibitors.	Booth	Exhibit	Square Feet
Sunset Magazine Company	90	75	232
Sweetzer, L. H.	100	100	139
Shore Instrument & Manfg.Co.	100	95	256
Souvenir Watch Company	50	00	353
Sperry-Hutchinson & Co.	100	100	625
Toledo Scale Company	100	100	1028
Troeger Manufacturing Co. G.M.	100	00	687
Todd Co., G. W.	100	100	132
Uruguay	25	10	2023
Underwood Typewriter Co.	35	15	6934
United Autograph Register Co.	100	35	380
United States Government	100	100	65385
Vanescope Company,	100	00	472
Vermillax Company,	100	95	407
Victor Talking Machine Co.	100	100	3256
Warner & Swasey Co.	100	100	657
West Disinfecting Company	100	90	266
Western Carbonic Gas Co.	100	100	176
Western Union Telegraph Co.	100	75	2060
Willett, Walter M.	100	100	400
Wisconsin Seating Company	25	00	1203
Wizard Foot Appliance Co.	100	95	261
Worden, [illegible]	90	40	720

If I had this to do over again I would prepare to double the entire force during this period and make at least three eight-hour shifts. I would be guarded against contractors who promised to do things and could not live up to their promises, and advise that each exhibitor should be ready at least a week prior to opening day, although this Exposition was nearer completion at that time than any previous exposition. I would get in closer touch with the shippers' end, the railroads and transportation companies. I would particularly warn against procrastination by managers in charge of exhibits, who feel positive in most cases that they can finish on time, but we found very few of them who were able to judge the time it would take. Perhaps it was not so much the exhibitors' fault as the contractors who had taken so many booths to build and could not finish them on time, not because they could not get the men, as they claimed, but because they could not give more than one or two booths their attention at one time, thus delaying matters to no small extent.

MITS

The regulation of permits for exhibitors and

their permanent and transient employes was one of the most difficult problems to judge and handle this Department had to contend with. Like all Expositions it seemed quite natural that exhibitors would take advantage of this permit business and in most cases abuse it to the extent that it required at all times one clerk in the office, with the help of the Floor Superintendent, to give out and keep track of permits. However, through the efficiency of the Admissions Department we were able in the majority of cases to keep reliable count of same.

ONCESSIONS

This Department was comparatively free of selling concessions, having perhaps not more than ten at any time. At no time did we have any serious trouble with them.

OVERNMENT
XHIBIT
EPT OPEN
UNDAYS

During the first few months of the Exposition period a great many people complained and insisted that the Government should keep its exhibits open on Sundays, instead of closing them, as they have done at all expositions. The Department made several requests to the Government officers and took the matter

up with the Division of Exhibits, but to no avail for the first few times, but the insistent demand of the people, seconded by appeals from the Exposition authorities, finally persuaded them to keep the exhibits open unofficially on Sunday, with no attendants but only United States marines on guard. After they had decided to keep it unofficially open to the public it was demonstrated by the great number of inquiries and the interest shown in the exhibits by the people, that it was really the best day in the week, and as a result the regular attendants were again placed in charge.

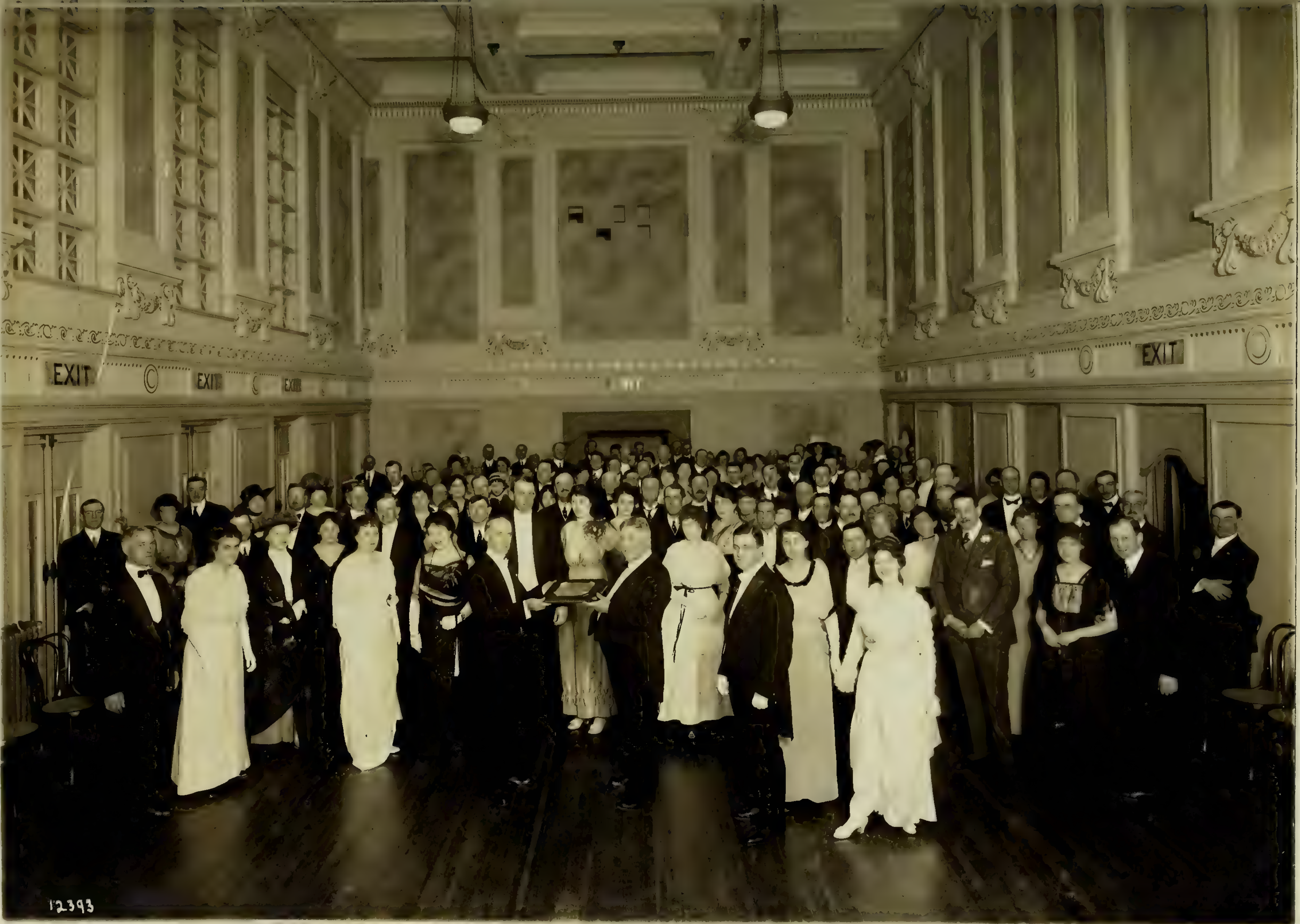
However, it was not only the Government Department which objected to remaining open on Sundays. In fact, the majority of exhibitors were opposed to it and the Department had some little difficulty endeavoring to prove to them that Sunday was one of the best days to demonstrate, - in fact the best day of the week. The general objection did not come from the head offices of the various companies exhibiting. The opposition came from their representatives in charge, although there were a few of the larger firms which had scruples about Sunday, and never did open their exhibits to the public on the Sabbath. This, from an

advertising viewpoint, was perhaps a mistake. Uplifting and educational as all the exhibits were the people could do far worse with their leisure hours on Sunday than looking at an exhibit. It was a day when people, business and working men particularly, were relaxed and were able to observe the things that did them the most good.

To some extent, as a great many of the attendants at the booths were women and girls, the California eight-hour law and six days a week law interfered with the Sunday opening, naturally causing a little more expense to the exhibitors to keep the exhibit open on that day, although this was offset by the great amount of advertising they received in addition to their weekday demonstrations. A great many complained, perhaps to some extent justly, that the Sunday opening only brought them in contact with the San Francisco people, but inasmuch as it was the San Francisco and California people who really made possible the great crowds which attended the Exposition why should not they be considered as good prospects to whom to advertise?

ARD
OTECTION

For the protection of the exhibitors in the beginning of the exposition there were nearly as many guards in the building as there were doors, but between seasons in the early spring, when the attendance dropped off very materially, the Guard Department also dropped many guards, leaving only two in the buildings where there were from seven to eight before. To a great extent this proved inconvenient to visitors and exhibitors alike, inasmuch as the people could not ask where certain exhibits were, as they had been in the habit of going to the guards as a source of information. Stealing also became more prevalent, although we must confess that there was very little stealing in the building at any time, except toward the close of the Exposition. This we naturally expected under the circumstances. Perhaps out of three arrests made by the guards during the Exposition in the Liberal Arts Palace we only remember one serious affair, so indeed we were very fortunate in this regard, thanks to the general activity of the Guard Department itself. There was no real organized theft at any time.



Liberal Arts Club Presenting Silver Plaque to Chief Hardee

BERAL ARTS
IBITORS
GET
GETHER

The esprit de corps of the Liberal Arts exhibitors was to be commended. As a means of bringing the exhibitors in touch with each other and creating a better social and commercial relationship the Department brought about the organization called the "Liberal Arts Progress Club". This caused no end of enthusiasm, get-together-spirit and a pleasant relationship between the exhibitors, and did far more toward the ultimate success of the Department, giving as it did the exhibitors a participation in the handling of local affairs, than anything else could have done. It brought about a regular family spirit and made possible the easier carrying out of Rules and Regulations, as the Club and the exhibitors made themselves responsible individually and took pride in the conduct of the Department. It brought about a greater co-operative interest, although, as happens in all cases of this kind, in spite of their enthusiasm and helpfulness, it always depended upon the Department to take the initiative to keep things moving. However, the Club was organized and the first call for meeting sent out March 13, 1915, a copy of which call we quote herewith:

"We are organizing a Liberal Arts Progress

Club to bring about closer social fellowship and a better understanding between Exhibitors and the Department. We are working particularly to make the Liberal Arts Palace attractive to the public and your exhibits of more value to your firm. In fact, it is the means of meeting in common to exchange favors and courtesies, at all times keeping in mind a greater success for the Liberal Arts Department.

"One of our principal functions will be to create new ideas and novel events that will at all times make the Liberal Arts Palace so attractive to the general public that they will not be able to forget our building at any time.

"Not perhaps the first of the big events we will work for from this date on, and for which we ask your co-operation, is to be the Liberal Arts Day. This we will make one of the big days of the Exposition. The date of this event to be decided at our first meeting.

"The general purpose of the Club will be to Co-operate and Boost. In fact, that will be our slogan, "Co-operate and Boost.

"We respectfully request that you send a duly accredited representative to the office of the Liberal Arts Department and enroll as a member of the Liberal Arts Progress Club."

The officers and committees selected at the first regular meeting and afterward elected were as follows:

Honorary Chairman	Theodore Hardee	Chief of Liberal Arts
Chairman	J. G. Decatur	Western Union Telegraph Company
1st Vice Chairman	H. P. O'Reilly	American Telegraphone Company
2nd Vice Chairman	Paul R. Mahony	Remington Typewriter Company
Secretary	A. J. Rich, Jr.	Chronicle Publishing Company
Treasurer	H. D. Miller	New York State Barge Canal

Chairman of Entertainment	A. F. Clarke	Eilers Music Company
Chairman of Liberal Arts Day Committee	Geo. W. Peck	American Tel. & Tel.Co.
Toastmaster	Paul R. Mahony	Remington Typewriter Co.

PUBLICITY COMMITTEE

A. J. Rich	Chronicle Publishing Co.
R. E. Vose	Tribune Publishing Co.
G. E. Pancoast	W. R. Hearst Publications,
F. Marriott	San Francisco News Letter
C. K. Field	Sunset Magazine
Miss Lillian Gatlin	
H. W. Kerrigan	

ENTERTAINMENT COMMITTEE

Jewell S. Jewell	Sprague-Hathaway Co.
A. F. Clarke	Eilers Music Company
H. Laughlin, Jr.	Laughlin Fruit Refining Co.
F. W. Andruss	Sperry & Hutchinson Co.
Mrs. A. Blanchard	Dept. of State, Government
O. E. McQueen	General Acoustic Company
A. J. Rich, Jr.	Chronicle Publishing Co.

H. W. Kerrigan acted as Secretary at the first meeting.

T SOCIAL
TOGETHER"

The first social affair of the Liberal Arts Progress Club was a get-together meeting and reception to meet the Chief of the Department. This was held in the Ohio State Building on the evening of April 29, 1915. The various Foreign and State Commissioners were invited. On that eveing the Chief met in person each and every one of his exhibitors and was presented with a silver plaque given him by the exhibitors of the Department.

Then followed a dance and refreshments, the music being furnished by two orchestras. It was one of the most enjoyable affairs of the Liberal Arts Progress Club. At a later date they gave a house-warming in the Liberal Arts Palace, which brought together all the exhibitors and their employes.

AL
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To encourage exhibitors to put forth greater efforts for more advertising from time to time, wherever it was possible, we arranged special programs. These enlivened the Department to a great extent and attracted the attention of the public as well, which was the first consideration. Several of the exhibitors, such as the Victor Talking Machine Company, the Columbia Graphophone Company, Eilers Music Company, the Sonora Phonograph Company, Jonah Kumalae, the Garford Manufacturing Company, Guerrine & Company, Hohner & Company, the Underwood Typewriter Company, the Gabel Automatic Entertainer Company, the Cheney Talking Machine Company, Mills Novelty Company, the United States Government, the New York State Barge Canal, the National Cash Register Company, and the American Telephone & Telegraph Company, presented special programs filling every day, while every Tuesday and Thrusday the United States Government furnished a government band, which played two hours and

a half these days. This added quite an item to the entertainment list and attracted greater attention to this building.

Besides the above we had several special events and days, such as the dedication of the large exhibits, which was a nice means of introducing the particular firm and entertaining the public. Principal among these were the Argentine exhibit dedication, Schmidt Lithograph Company, the Victor Temple, which combined its dedication and "Jobbers" Day. This last company put on several programs, such as dansants on the lawn in front of the Palace, which proved very entertaining and attractive to the public.

One of the big special events was "Liberal Arts Day". It was scheduled for and held on Tuesday, June 29,1915. This was a day of days and will be long remembered. Prizes were given away, and a musical program, with speeches, songs and toasts filling every moment of the eventful "Liberal Arts Day". The program was started in the morning at the raising of the Liberal Arts flag to the top of the building, accompanied by a band of music and the "Liberal Arts Day" committee, which consisted of the following gentlemen:

L ARTS
TEE

Richard A. Fanto	General Acoustic Co.
E. Worthington	Victor Talking Machine Co.
Warren S. Quinn	American Druggist Syndicate
Clyde A. Aunger	Aunger Artificial Limb Co.
W. D. Fenner	Chicago Artificial Limb Co.
R. S. Weville	Norman T. A. Munder Co.
H. C. Palmer	Grolier Society
Geo. W. Peck	American Tel. & Tel. Co.
Paul Rieger	Paul Rieger & Company
J. C. Boykin	Government Exhibit Board
Paul Elder	Paul Elder & Company
G. L. Rosebrook	C. G. Conn, Inc.
H. T. Dale	Gem Ear Phone Co.
John Howell	John Howell Book Co.
E. W. Kraft	Keuffel & Esser Company.

The Official Program for "Liberal Arts Day", which is self-explanatory, is herewith appended.

RAMME
INUED

Following the program in the Building and the presentation of the prizes, Art Smith gave a flight at five P. M. and later in the evening an illuminated flight. A special piece of fireworks was shown and set off at nine P. M., which read:"Liberal Arts Day".

TS

The Gift Committee succeeded in securing about ten different prizes from exhibitors in the Building, which was one of the things that helped a great deal to advertise that day, attracting no little attention, as the public are always interested in anything given away in the prize line.

Those present on Liberal Arts Day on the platform with the Chairman of the Day, Mr. Paul R. Mahony, were:

Mr. Charles C. Moore, President,

Mr. R. B. Hale, Vice-President,

Dr. Frederick J. V. Skiff, Director-in-Chief,

Captain A. C. Baker, Director of Exhibits,

Major-General Arthur Murray, Commanding Western Department, U. S. Army, Fort Mason, California,

Mr. Edward R. Rainey, representing the Mayor of San Francisco,

Hon. H. A. van C. Torchiana, Commissioner-General for the Netherlands and President of the Association of Foreign Commissioners,

Hon. H. Yamawaki, Commissioner-General for Japan,

Hon. Chen-Chi, Commissioner-General for China,

Mr. J. C. Boykin, Government Exhibit Board,

Mr. Edwin Markham, Poet,

Mr. George H. Perry, Director of Exploitation,

Mr. F. D. Egilbert, Commissioner-General for California,

Mr. J. S. Decatur, President Liberal Arts Progress Club,

Mr. Theodore Hardee, Chief of Liberal Arts.

Opening the ceremonies, Chairman Mahony gave a brief talk, explaining the reason for Liberal Arts

Day, or the purpose of the ceremonies, giving the general idea of the Liberal Arts Exhibitors in getting together, after which he introduced President Charles C. Moore, who made an appropriate speech, congratulating the Department on its great success, its splendid commercial and educational exhibits, the hearty cooperation of its exhibits, and ended by presenting the Department and the Liberal Arts Progress Club with a beautiful engraved testimonial signed by the President and the Secretary of the Exposition.

This was a very appropriate ceremony and the presentation address was answered in person by the Chief of the Department, as follows:

> "Mr. President, Ladies and Gentlemen:
>
> In behalf of the Exhibitors in the Department of Liberal Arts, I accept with deep appreciation this thoughtful memento of today's celebration. The magnificient contribution of these exhibitors towards the enlightment of mankind, and the success of this great undertaking is, I believe, well worthy of such a compliment.
>
> This is indeed the day of days for the Liberal Arts Department, which has earnestly endeavored to live up tothe prominent position it occupies in this most brilliant and important of International Expositions.
>
> This Department is extremely proud of the splendid showing made by the Liberal Arts Exhibitors who deserve unstinted praise and credit for their beautiful, interesting and remarkably instructive displays in not only the vast

structure under whose roof we now are, but also in many other buildings on the Exposition Grounds.

The exhibitors in this Department may well be proud of their efforts which so importantly help to maintain the high standard and character of the 1915 Exposition - the greatest educational factor the world has ever known.

The Panama-Pacific International Exposition has been very aptly termed an "Encyclopedia of Human Progress", and we believe that no chapter in this wonderful volume of knowledge is brighter or more replete with useful and attractive instruction than that devoted to the Liberal Arts.

As the official responsible for the development of this Department since its organization two and one-half years ago, I welcome this opportunity to pay fitting tribute to the four men without whose encouragement and support the results achieved would have been impossible.

I refer first to President Moore whose enthusiasm, confidence and active leadership have proved a source of never failing inspiration to us all; to Vice-President Hale for his ever watchful and helpful interest as Chairman of the Committee on Exhibits; to the Director-in-Chief, Dr. Skiff, whose profound knowledge of Exposition practice and wise guidance have at all times been indispensable; and to Captain Baker, our genial Director of Exhibits, upon whose prompt and sympathetic assistance my Department could always rely.

And Ladies and Gentlemen, I feel these expressions would be incomplete without proper acknowledgment by the Chief of this Department, of the lasting debt of gratitude he owes to each and every exhibitor under his jurisdiction, and especially to those who came from far distant lands to help make our National celebration the unparalleled success it is.

Underwood

I want also to commend in the warmest terms the Liberal Arts Progress Club to whose enterprise and activity a large measure of today's success is due. The earnest, loyal and patriotic cooperation of all these elements made possible the highly creditable picture here presented.

The really great compensating lesson of this Exposition, as exemplified in its wonderful array of exhibits, is not only in showing what *has* been accomplished through man's ingenuity and energy in the past, but the splendid promise given of unlimited possibilities for the future development and well-being of the human race.

The far-reaching and beneficent effects of this friendly gathering and rivalry between the Nations here represented will continue to grow through the better understanding this close contact engenders. Let us fervently hope that the potential influence thus exerted will very soon result in the return of the entire world to the gentle arts of peace and enjoyment of prosperity and happiness which are its sure rewards.

In conclusion, Mr. President, permit me to voice the sentiments of both my Department and its many exhibitors in thanking you most heartily for the honor of your presence and for the kind words of approval you have so graciously uttered here today."

Following this, short talks were made by the Director-in-Chief, Dr. Skiff, Director of Exhibits Baker and Commissioner-General Torchiana, who represented the Foreign Commissioners.

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A special feature of the day's program was the keeping count of those entering the building. The interesting result of that count we submit herewith, as given by the Comptometer:

"Attendance of the Palace of Liberal Arts on Liberal Arts Day, Tuesday, June 29th, 1915. Compiled for the Liberal Arts Department by Felt & Tarrant Mfg. Company, exhibitors of the Comptometer at Ave. C & 2nd St., Palace of Liberal Arts, assisted by a battery of 12 Comptometers and 16 Comptometer operators under the direction of C. G. Dominy who is in charge of the exhibit.

"The following tally of attendance including the footings and percentage analysis was made on the Comptometer:

Door Number	10 AM	11 AM	12 N	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM
1.N.Entrance	32	57	157	201	409	345	424	438	422
to Gov. Exhbt.		98	246	447	856	1201	1625	2063	2485
2.N.Entrance	58	59	204	221	316	161	432	362	385
on 5th Street.		117	321	542	858	1019	1451	1813	2198
3.Court Blvd.	15	31	33	57	121	91	233	96	102
Ave. A & 7 St.		46	79	136	257	348	581	677	779
4.Court Blvd.	29	27	95	105	114	90	148	109	60
near Ave. B.		56	151	256	370	460	608	717	777
5.Court Blvd.	17	37	42	35	67	33	66	30	49
near 8th St.		54	96	131	198	231	297	327	376
6.E.Entrance	149	328	518	468	881	966	1024	457	263
on Ave. C.		477	995	1463	2344	3310	4334	4791	5054
7.E.Entrance	217	327	508	421	988	490	395	248	214
bet.Ave. C&D.		544	1052	1473	2461	2951	3346	3594	3808
8.S.Entrance	40	350	385	353	820	448	287	138	97
7St.& Ave.D.		390	775	1128	1948	2396	2683	2821	2918
9.S.Entrance	374	607	355	329	794	558	521	194	222
on 5th Street.		981	1336	1665	2459	3017	3538	3732	3954

10. S. Entrance	21	32	35	80	115	72	68	81	83
bet. 2 & 3 Sts.		53	88	168	283	355	423	504	587
10A. Corner	26	60	94	114	341	264	254	301	201
Entrance near Ave. D & 1St.		86	180	294	635	899	1153	1454	1655
11. W. Entrance	71	108	251	352	872	467	983	952	619
on Ave. C.		179	430	782	1654	2121	3104	4056	4675
TOTAL	1049	2023	2677	2736	5838	3985	4835	3406	2717
		3072	5749	8485	14323	18308	23143	26549	29266
Percent of each hour to total	3.58	6.91	9.15	9.35	19.95	13.62	16.52	11.64	9.28

Percent of each door to total

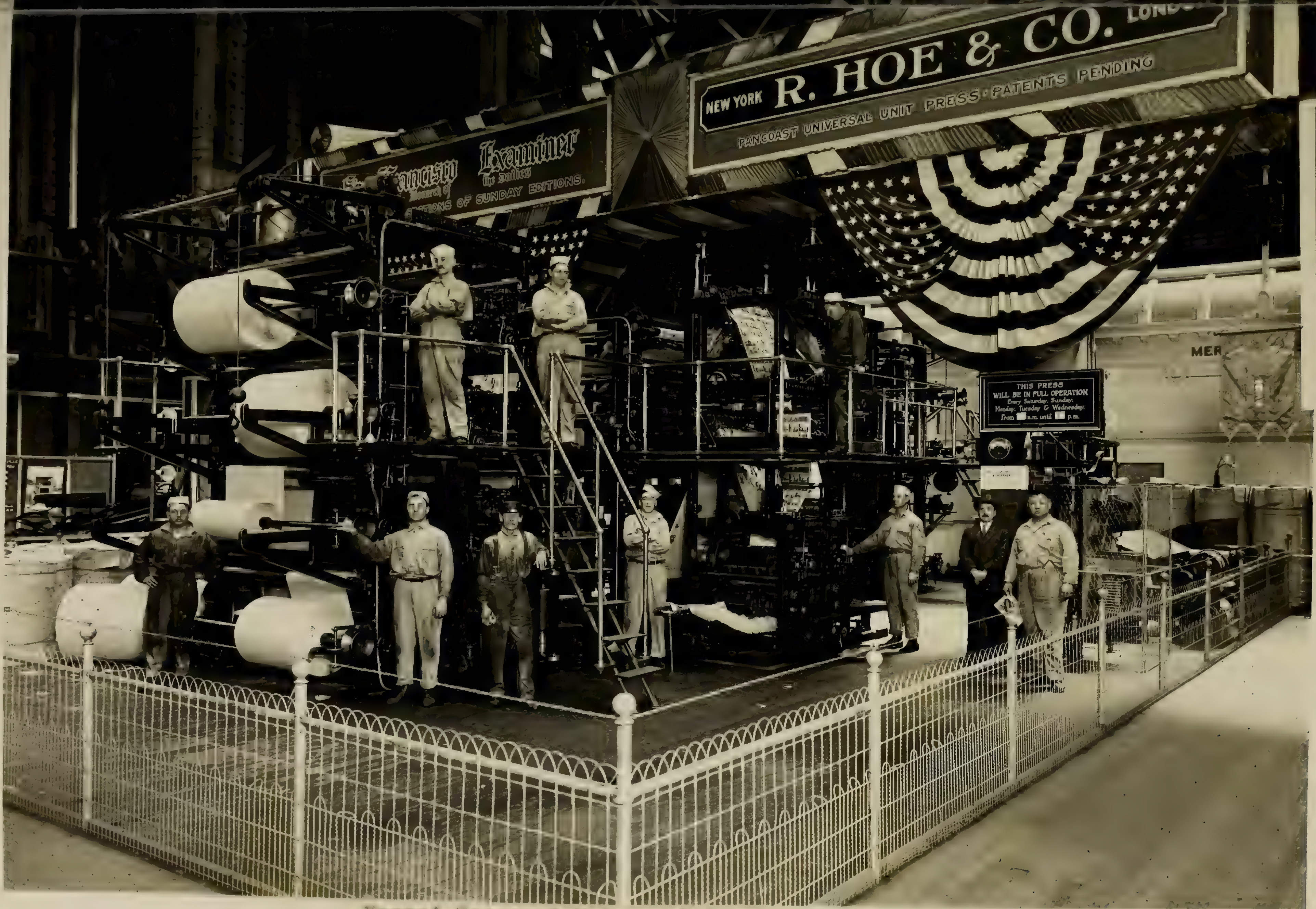
#1 - 8.49 #2 - 7.51 #3 - 2.66 #4 - 2.65 #5-1.28

#6 -17.27 #7 -13.01 #8 - 9.97 #9 -13.51 #10-2.01

#10A-5.66 #11-15.97

General Admission to the Grounds at 6:00 P. M.........36,608

Percentage of attendance to the Palace of Liberal Arts 73.89


NEW YORK R. HOE & CO. LONDON
PANCOAST UNIVERSAL UNIT PRESS · PATENTS PENDING
Francisco Examiner
Monarch of the Dailies
SECTIONS OF SUNDAY EDITIONS.
THIS PRESS
WILL BE IN FULL OPERATION
Every Saturday, Sunday,
Monday, Tuesday & Wednesday.
From a.m. until p.m.
MER

Hearst Pancoast Universal Press

DESCRIPTION OF EXHIBITS

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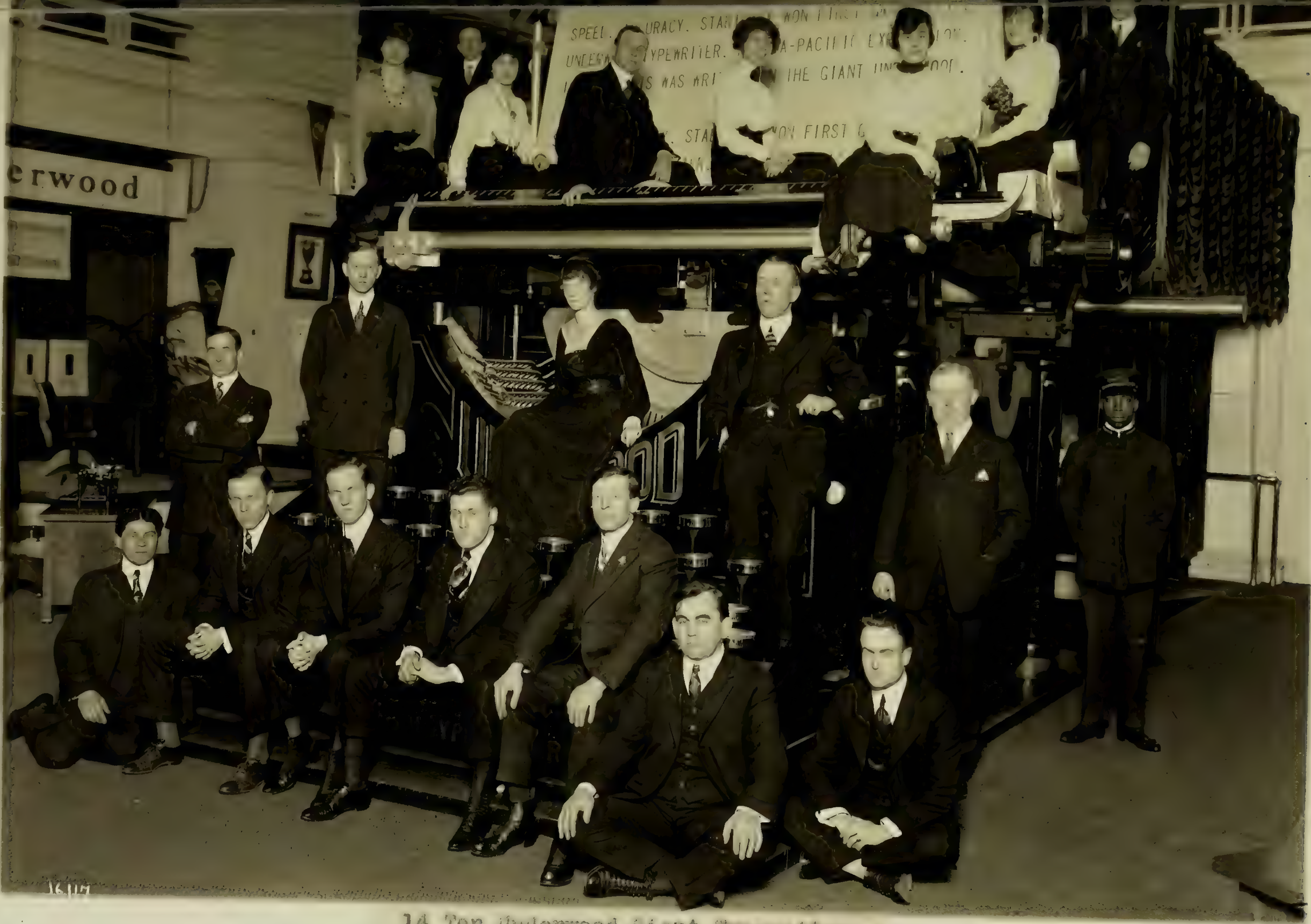
The Pancoast Press, exhibited by William Randolph Hearst, is the largest color press in the world, its full capacity, when running at top speed and printing in one color, being 1,728,000 newspaper pages per hour. This production demands the use of 96 curved printing plates, each the size of a newspaper page, together with six rolls of 73-inch paper, each weighing about 1,200 pounds. As actually in use during the Exposition, this press was equipped with 74 plates, arranged to print as follows: 12 yellow, 12 red, 8 blue, 2 orange and 40 black, each plate weighing about 50 pounds. The designing of the Pancoast Press was commenced in September, 1914 and the press itself was completed in January, 1915; its weight when erected is 130 tons, length 48 feet, height 13 feet, breadth 9 feet and motor 80 horse power. The Pancoast Press may claim the distinction of being the first to pass through the Panama Canal.

The Underwood Typewriter Company had on exhibition the largest typewriter in the world, it being 1728 times larger than the Standard Underwood Typewriter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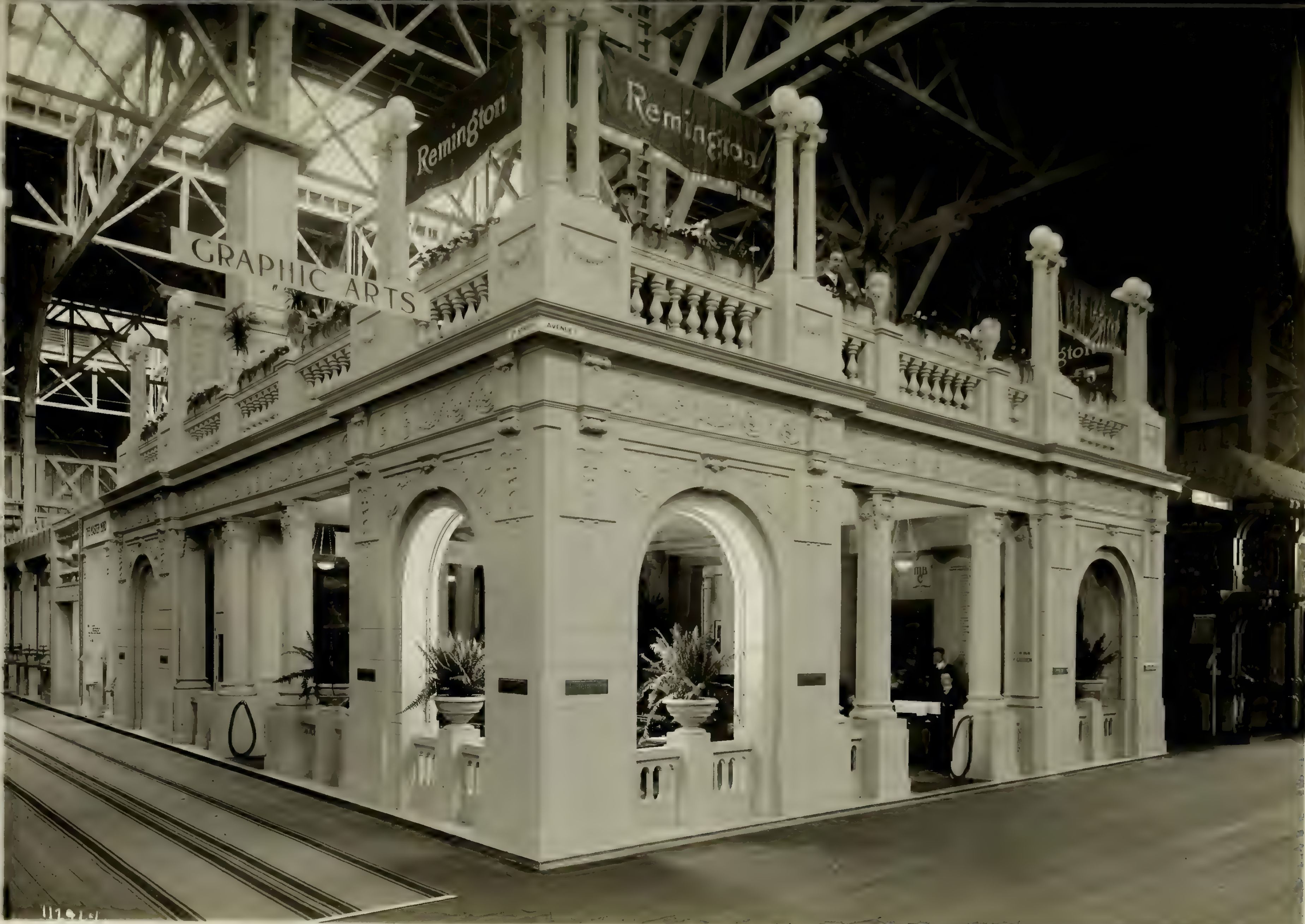
14 Ton Underwood Giant Typewriter

and weighing 14 tons. Another interesting feature of this exhibit was the Progress Show depicting the "Evolution of the Typewriter", which was shown in living pictures. They had on display late models of calculating and bookkeeping machines, complete in every detail; some of these costing as high as $1000. One very effective machine displayed was their writing-adding machine. This in itself was an advanced step in office efficiency.

The Corona Typewriter Company exhibited the folding typewriters, an ideal portable typewriter particularly useful for field work.

The Remington Typewriter Company had a comprehensive exhibit of typewriters for every conceivable purpose, covering keyboards in 56 different languages; typewriters with attachments for adding, subtracting, multiplying and dividing; typewriters with very long rolls for statement work; small portable typewriters; typewriters for special secretarial work, in which no ribbon came between the paper and the type, which are inked direct from a pad, and a typewriter which is operated by electricity, making 14-1/2 strokes per second. This last is an exhibition feature to show the durability of the machine. An interesting feature of

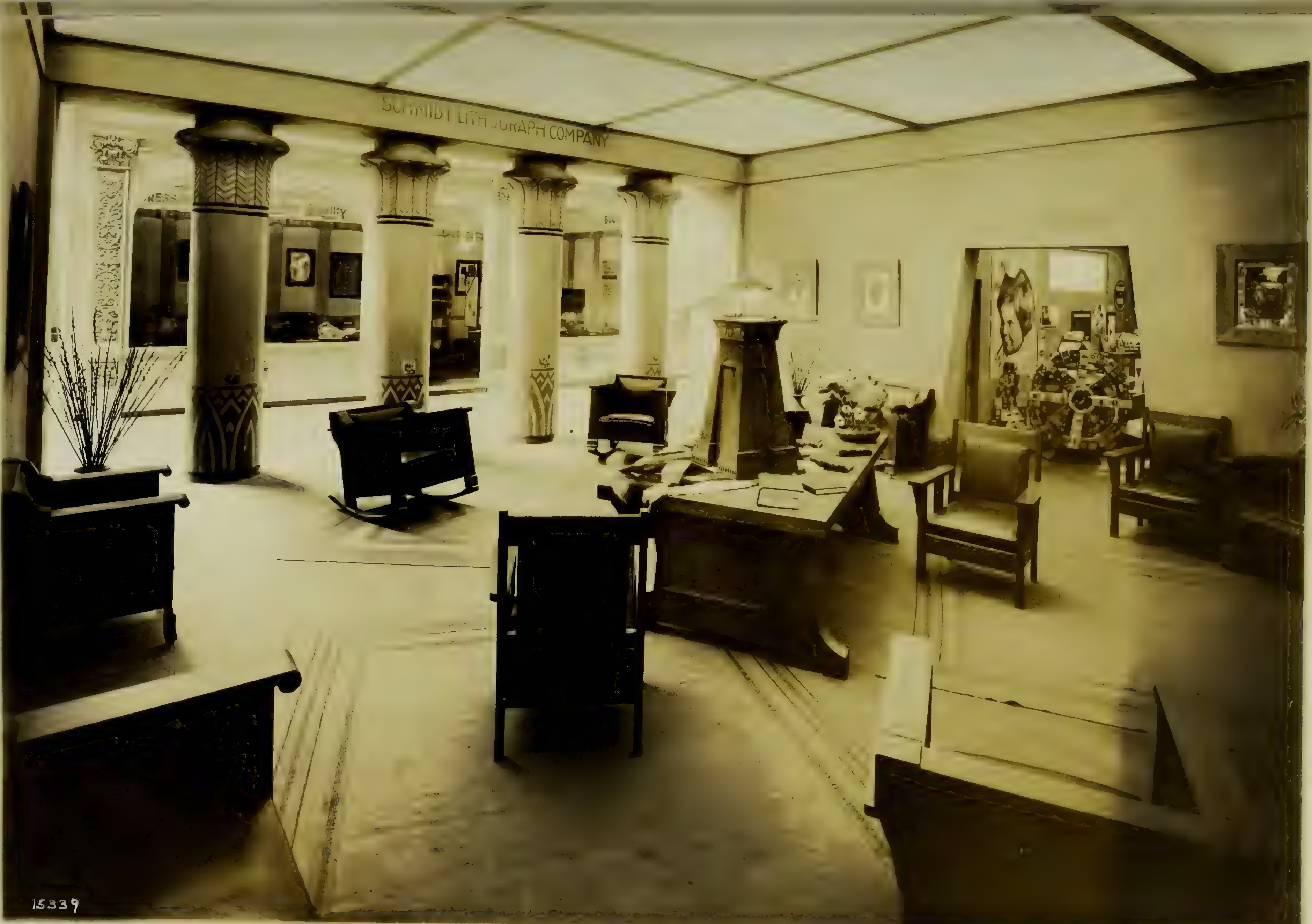


Remington Typewriter Exhibit

the exhibit was the evolution of the typewriter as shown by models from the first, which was made in 1867 and which was not practical, down to the 1915 Panama-Pacific Model.

The Egry Register Company have a display of registers which will issue three full copies of each transaction identically alike, two of which are discharged from the register, while a third full copy is retained under lock and key until removed by the person in charge. They also exhibited Roll-Out Manifolders for the manifolding of either duplicate or triplicate copies of any description to be issued at one and the same writing; the Dupligraph, which is constructed to issue duplicate copies, both of which are discharged from the register; the Memophone for the recording of telephone messages, orders at desks, etc.; Total Summary Registers, which retain under lock and key a summarized or tabulated record of business transactions;etc.

The Schmidt Lithograph Company exhibited a complete line of lithographic work, viz.: designs for letterheads, trade-marks, cards, announcements, labels, catalogues, booklets, folders,cartons, bill board posters, calendars and all kinds of decorative and illustrative work relating to lithography.



Interior Schmidt Lithograph Company Booth

The H. S. Crocker Company exhibited an interesting display of office appliances, representing the Acorn Brass Manufacturing Company, Addressograph Company, Beck Duplicator, A. B. Dick Company and the O. K. Manufacturing Company. The Addressograph, a device manufactured by the Company of that same name, is a machine used for addressing envelopes, cards, circulars, bills, statements, in fact most everything, from a plate and with absolute accuracy. The A. B. Dick Company produce a duplicator that quickly reproduces drawings, diagrams, designs, etc., without the use of plates. Typewriting may also be included on the same sheet without the necessity of an extra run. The development of the dermatype process, and the newest rotary mimeograph, has put this machine in the lead of other duplicating processes. An envelope sealer made by the Acorn Brass Manufacturing Company moistens and seals envelopes as quickly as they can be fed to the machine, and is opperated by electricity. The O. K. Manufacturing Company exhibited a letter cutter, a small machine that cuts envelopes neatly and quickly and is certainly a great saving of time from the old method of using a paper knife.

The Peerless Check Protecting Company exhibited a machine for writing checks which cannot be raised. The letters are written in vertical shredding, which, however, does not split the check, and heavy inking. These are capable of facile and rapid operation, and give absolute protection against the changing of a check in any way.

The Automatic Bookkeeping Register Company exhibited a machine which is scientifically designed for the use of retail merchants extending credit. It's principal functions are to accurately and permanently record and total the details of all credit, cash and various supplementary transactions, and in addition is cleverly converted into a perfect working listing machine.

Funk & Wagnalls exhibited a full line of pictures showing original plates for illustrations in a Dictionary, and the progressive steps through which they pass to become the finished lithographic product; also pictorial exemplification of making the New Standard Dictionary from the manuscript through the editorial rooms, etc., to the finished book. There was also quite a display of original drawings for cover designs of the Literary Digest.

The Scott-Miner exhibit covered a display of designs for letterheads, cards, trade-marks, announcements, etc.; also designs for labels, catalogues, booklets and all kinds of pictorial advertising.

The G. W. Todd & Company exhibited a full line of their well known check protectors, an invention which gives protection against the raising of checks. This company is the oldest in the field in this line of machines, consequently their product is widely known and in demand where checks are issued in payments.

The United Autographic Register Company's exhibit consists of a register on which all sales checks are autographically registered with duplicate copies of same, thus insuring business men against loss in the sales rooms. This Company handled typewriter attachments also.

The American Automatic Press Company had on exhibition the late improved Boag Automatic Printing Press. As the name implies, this machine would feed, print and automatically fold on the one run. This is a very late innovation in the printing line, and was one of the contemporary inventions of the Liberal Arts Department, located in the Machinery Palace. The efficiency of this great machine as a labor saving device is being brought before the public to a great extent.

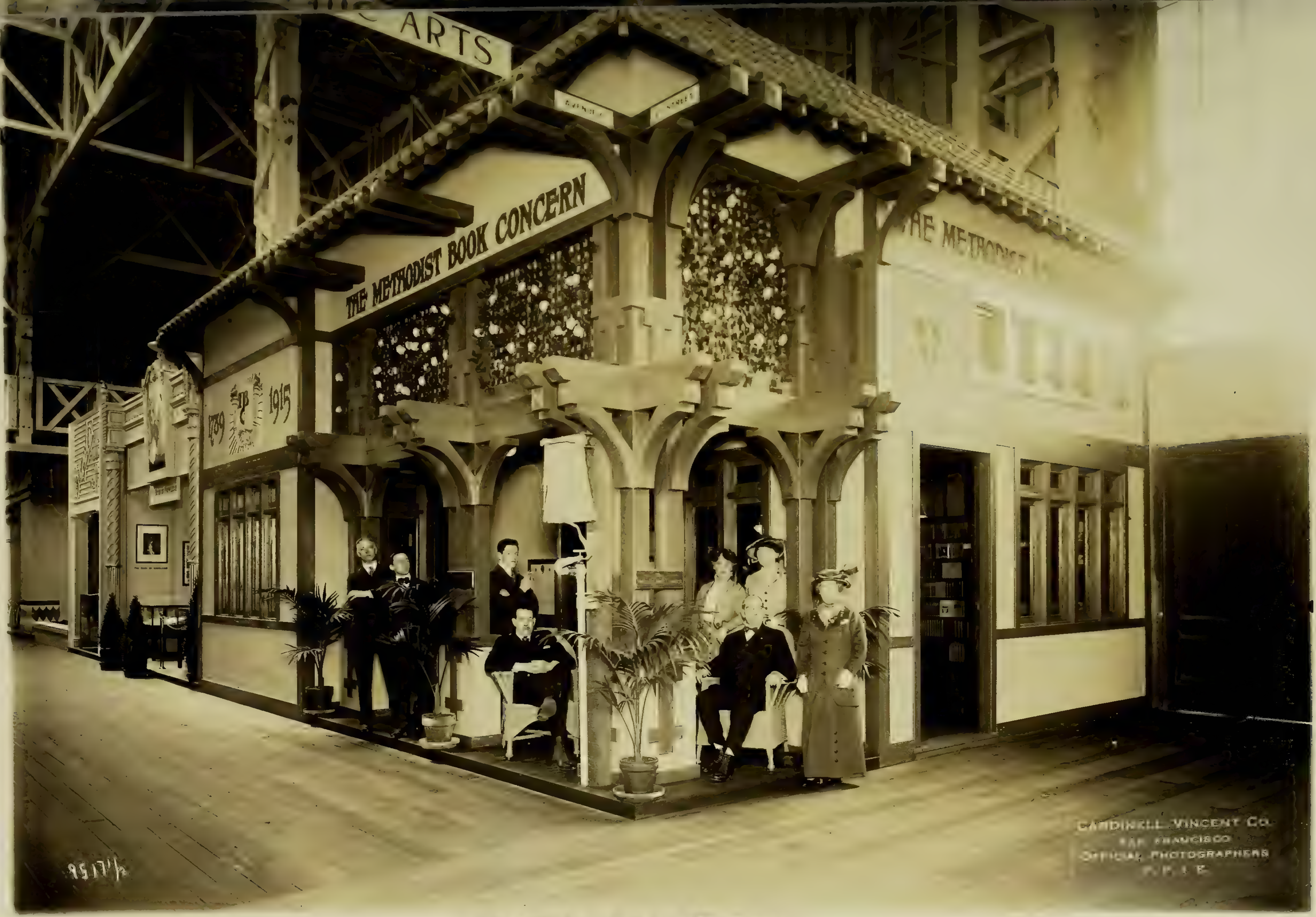
The Blair-Murdock Company were high class printers and publishers, specializing in editing, printing and binding; illustrating catalogues, booklets and advertising literature. This Company were the printers of the Panama-Pacific International Exposition Guide Book.

The Brown Barotype Company, exhibiting composing machines, brought to the notice of the public new inventions in that line.

The Lisenby Manufacturing Company had on exhibition the Multicolor Press; as the name would imply this machine prints in one run various colors - for instance, on the one letterhead would be the name of the party addressed, the body of the letter and the signature in three different colors. As one can see this would make it a very effective machine for office efficiency in particular lines of work.

The Lanston Monotype Machine Company exhibited various late improvements in the type setting machine line.

Mergenthaler Linotype Company exhibited a splendid collection of linotype machines, showing the process from the very beginning of the invention to the finished product.



Methodist Book Concern

The Geo. Russell Reed Company formed a collective exhibit of the following firms, Denny-Hilborn & Rosenbach Company, Graphic Arts Company, Robert Mayer & Co., John Royle & Sons, Paul Shniedewent & Co., Taylor-Hobson Company, H. H. Sheip Mfg. Co., Jos. E. Levy, Max Levy, Frederick H. Levy Co. and Edward C. Muller. These formed a very fine collective display of all kinds of printing machinery, such as binders, type setters, rollers and printers requisites.

#30
PUB-
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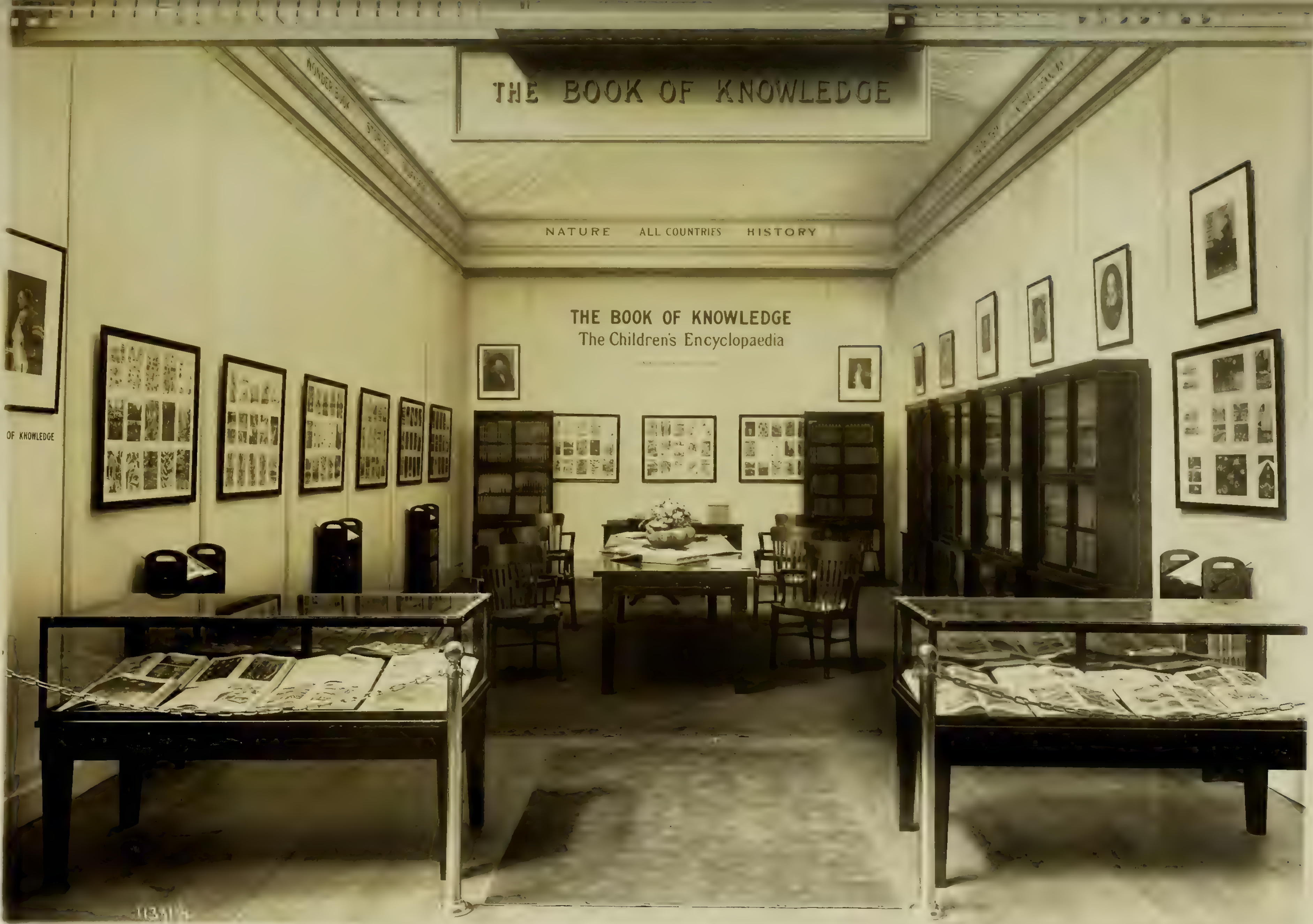
The Methodist Book Concern exhibited books, periodicals and charts, embracing new books, new editions of old books, Sunday School periodicals and a line of fine bindings and illustrations. A very interesting feature of the exhibit was an illustration of the making of a book from the time it leaves the author's hands until it is completed.

The Grolier Society displayed the "Book of Knowledge", the Children's Encyclopedia, which answers the impossible questions of children, with illustrations covering the many subjects treated.



Book of Knowledge - Grolier Society

The Encyclopedia Britannica exhibited new and old books, bindings, stampings, paper products and the Encyclopedia and Century Dictionary in six different bindings on India paper; also samples of the different editions from the first to the present, which is the eleventh edition.

The Curtiss Book Company exhibit covered a line of mystical, occult, psychic and philosophic books, which include the field of Christian mysticism.

John Howell had on exhibition a very interesting collection of rare old books, manuscripts and illustrations, covering illuminated manuscripts valued as high as four thousand dollars each, first folio of Shakespeare, first map showing America, and a number of other first editions, and books printed before 1500; famous statesmen's and literary men's autographs, with many other interest maps and documents. Also a line of standard works and fine bindings.

The Master Mind Publishing Company exhibited books and publications along metaphysical lines.

The Collier & Son exhibit consisted of the Harvard Classics, Dr. Elliott's five foot shelf of books, and a collection of cover designs from Collier's Weekly.

The Sunset Magazine exhibit showed prints and illustrations taken from the Magazine, reflecting the life of the Pacific Slope; also a collection of cover designs.

Norman T. A. Munder & Company exhibited paintings, statuary, frescoes, etchings and photographs of nature and of architecture; also attractive subjects of decorative and educational value by old and modern masters, embracing various examples of typogravure, with a line of artistic samples of framing.

The G. & C. Merriam exhibit consisted of editions of Webster's Dictionaries from 1806 to 1915, with pictorial elucidation of the making of the Webster Dictionary from stock room, where paper is ready for presses, to the finished product ready for shipping.

Paul Elder & Company exhibited publications and bindings, books on California; fine and rare books; leaflets, cards, brochures; and a line of artistically and originally bound books on contemporary trends of thought.

The Chronicle Publishing Company gave an interesting demonstration of the various processes of printing a newspaper, such as the original drawings, zinc etch-

ings, and in fact all materials used in producing a newspaper. This exhibit was particularly interesting to laymen.

F. Marriott, publisher of the San Francisco News Letter, showed a very interesting exhibit of a big town news letter.

The National Memorial of the United States had on display an artistic exhibit of beautiful book bindings, also fine tool work on leather. The exhibit was unique in itself for the reason of autobiographical subjects, giving the lives of various prominent citizens. The value of some bindings were given at $5000.

The Sperry & Hutchinson Company gave a fine exhibit of the means and methods of advertising by the use of the trading stamps, displaying an attractive line of premiums.

The Oakland Tribune Publishing Company had a particularly interesting exhibit of newspapers and binding work.

The Norman F. Hall Company formed a collective exhibit of the following companies: The W. O. Hichoh

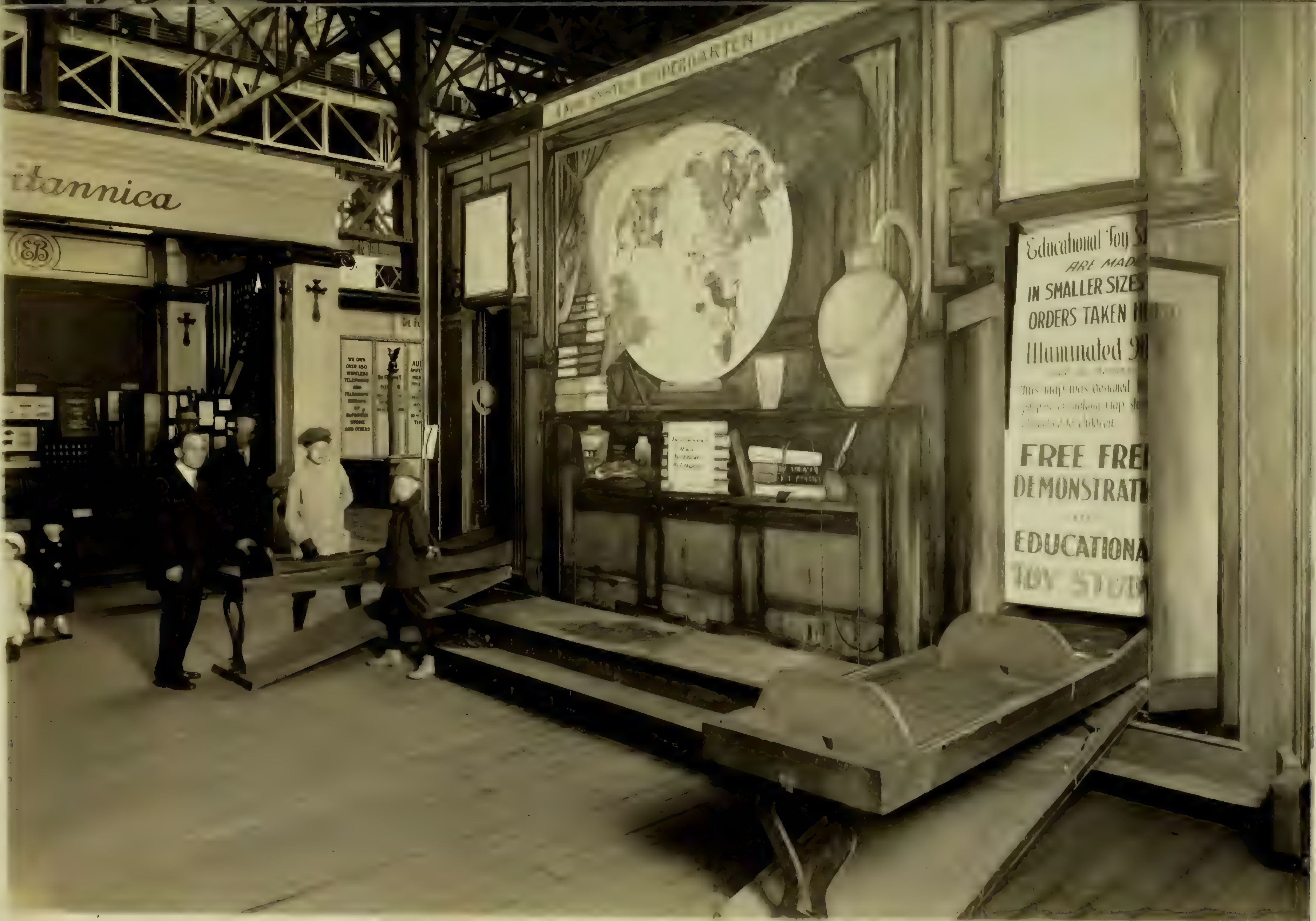
Manufacturing Company, manufacturers of paper ruling machines, book binding machinery, pens and inks; the book binding and gluing machines of the Chas. A. Muller Company was a particularly advanced idea in printing machinery; the Rosbach Company with their rotary perforators and perforators of every description, likewise punching machines, made this a most contemporary exhibit; A. G. Burton's Son was another firm of advanced ideas in perforating machines; the Cleveland Folding Machine Company, showing folding machines of various descriptions, covered all the necessities in the printing line; the Brown Folding Machine Company had a display of folding machines as well; the American Roll Gold Leaf Company's machine used for printing and laying of gold leaf by electricity on book covers and ends illustrates how this work is done; John Jacques & Son, inventors of shears and paper cutters, slitters and rewinders was also very interesting, and conveyed to the laymen's mind what the inventors were doing for the printers these modern days; the C. F. Anderson's exhibit of a binding press, used for the purpose of compressing and bundling stacks of printed matter as it comes from the press, conveyed clearly the elimination of hand power in the printing business; the Plimpton Transfer Truck Company, inventors of the Plimpton Hydraulic Transfer Truck, a machine for lifting heavy

loads, such as type forms and printing machinery, have given to the printing trades a necessity useful to every large concern; the Challenge Machine Company was another firm exhibiting paper cutters; the Fortune Machine Company's skiving machines showed what could be done in this line; the Seybold Machine Company's cutting machines showed a most contemporary feature in eliminating all hand labor, as did the Jos. E. Smyth Company, manufacturers of book sewing machines for all purposes. Another fine exhibit was of the Holliston Mills showing all shades of buckram for book covers adopted by publishers throughout the country.

The Pacific Press Publishing Company displayed a very fine line of bound books in foreign languages, and showing the process of manufacture as well. Also Seventh-Day Adventist Publications, Books, Tracts and Periodicals.

31 T. Ikemori exhibited a new educational game and illuminated map for kindergarten study, which, through play, teaches the children the continents, countries, capital cities, seaports and other geographical subjects.

Cahill World Map Company, a "Butterfly Map", showed the map of the world spread on a flat surface, which clearly gives the relations of the continents to each other in location and distance.



Ikemori's Educational Toy Study Map

#32
TURE OF

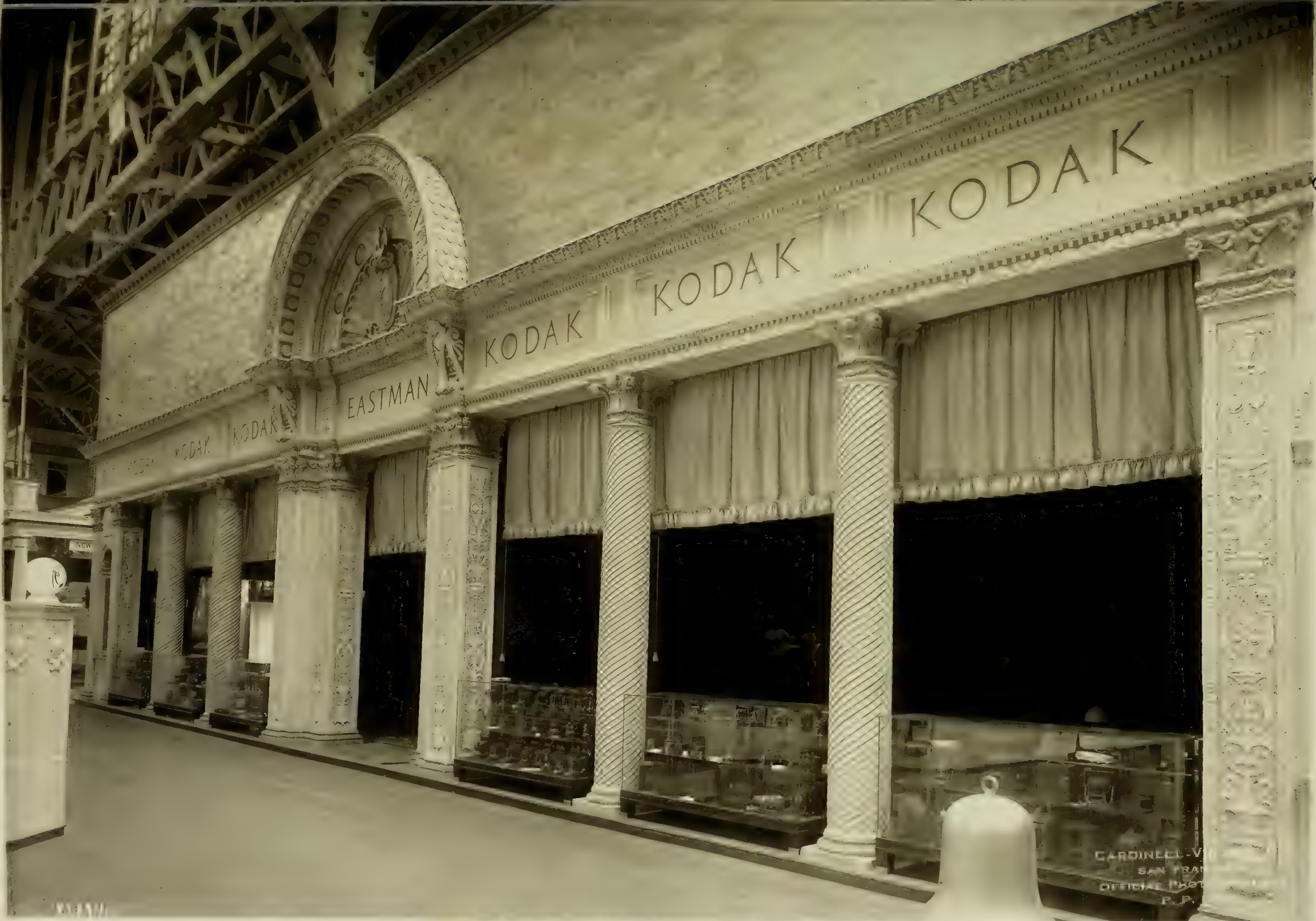
This Group which covered the manufacture of paper, raw materials, equipment, processes and products, was represented by such firms as E. C. Atkins & Company, Henry Disstons & Sons, Inc., Kalamazoo Vegetable Parchment Co., Louisiana Fiber Board Co., Louisiana Pulp and Paper Co., The Paraffine Paint Company, Simons Manufacturing Company and the Southern Fiber & Manufacturing Co.

In connection with this same Group, some of the finest paper ever on exhibition was display in the Japanese Section, and which received the Grand Prize for quality of production.

33
PHY

The Ansco Company was an exhibit of photography apparatus, such as fine lenses, shutters, tripods and all kinds of photographic supplies. They had an attractive wall exhibit of beauties of the United States, represented on the stage and elsewhere, taken with their own renowned films.

The Eastman Kodak Company was a most attractive booth and exhibit in the Palace of Liberal Arts. The composition of this booth in technic was beyond anything displayed in the Department. The color scheme and artistic

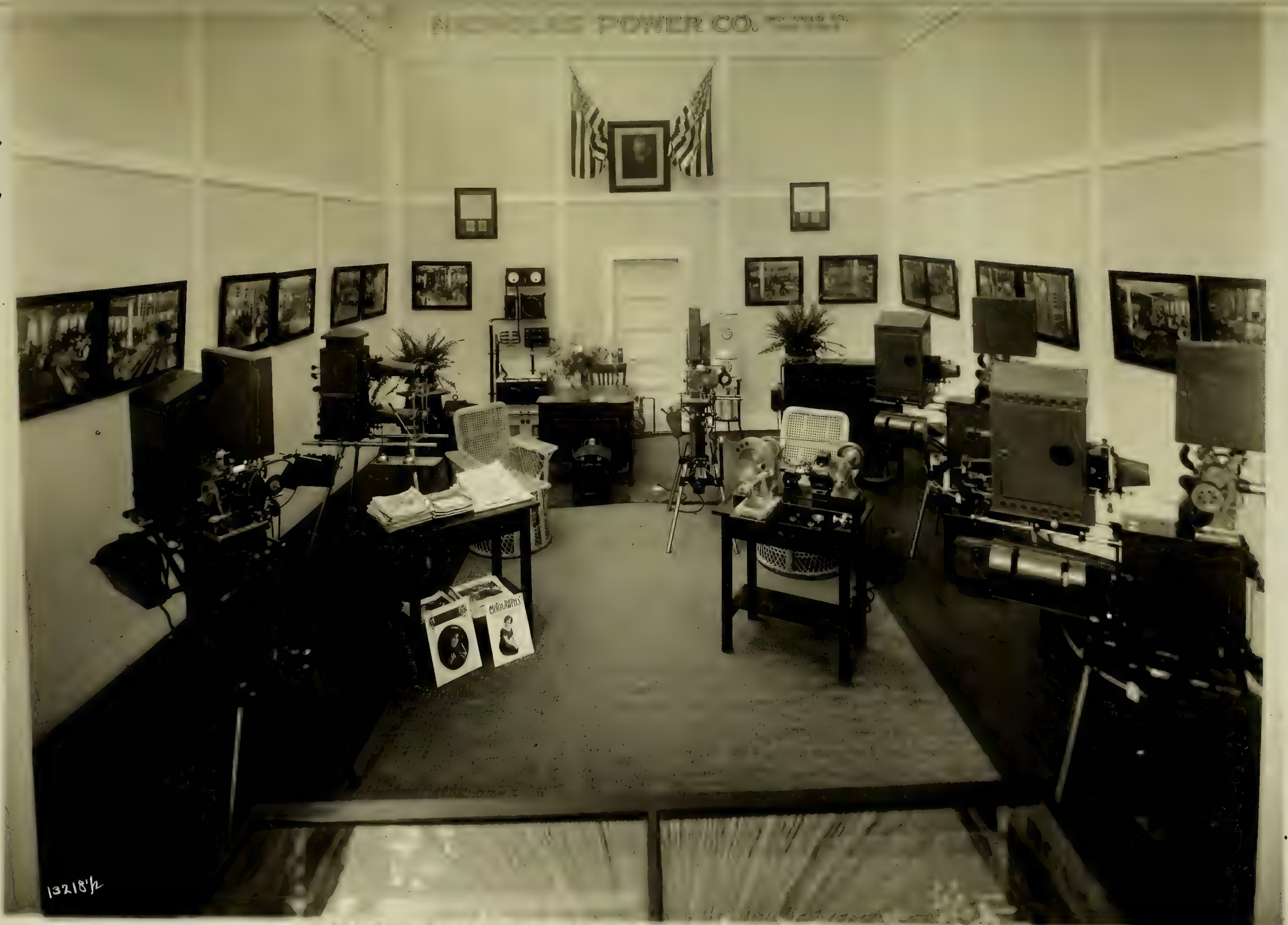


Eastman Kodak Company

furnishings of the booth each worked out as a separate unit. Their line of kodachrome - colored photography - shown by a light inserted in the wall behind a colored negative, made an effective display and attracted the eyes of everyone. The upper floor consisted of what experts said was the most effective display of portraiture offered at the Exposition. What attracted the eyes particularly was the soft indirect light, together with the original design of the pictures themselves.

Kathryn Hopkins, photographer, had a very effective booth of a rustic type, displaying photographs and specializing to some extent on pictures of character.

The Nicholas Power Company had a very interesting display of all the different parts of a moving picture machine, showing how it has been made possible to eliminate the flicker which for a long time was a drawback to the moving picture apparatus. Another object attained by this company is the providing of every possible device to insure absolute safety in handling inflammable celluloid films. An exhibit of this nature was of interest, not only to those in the profession, but to the public in general as the moving picture industry reaches all classes of people in all parts of the civilized world.



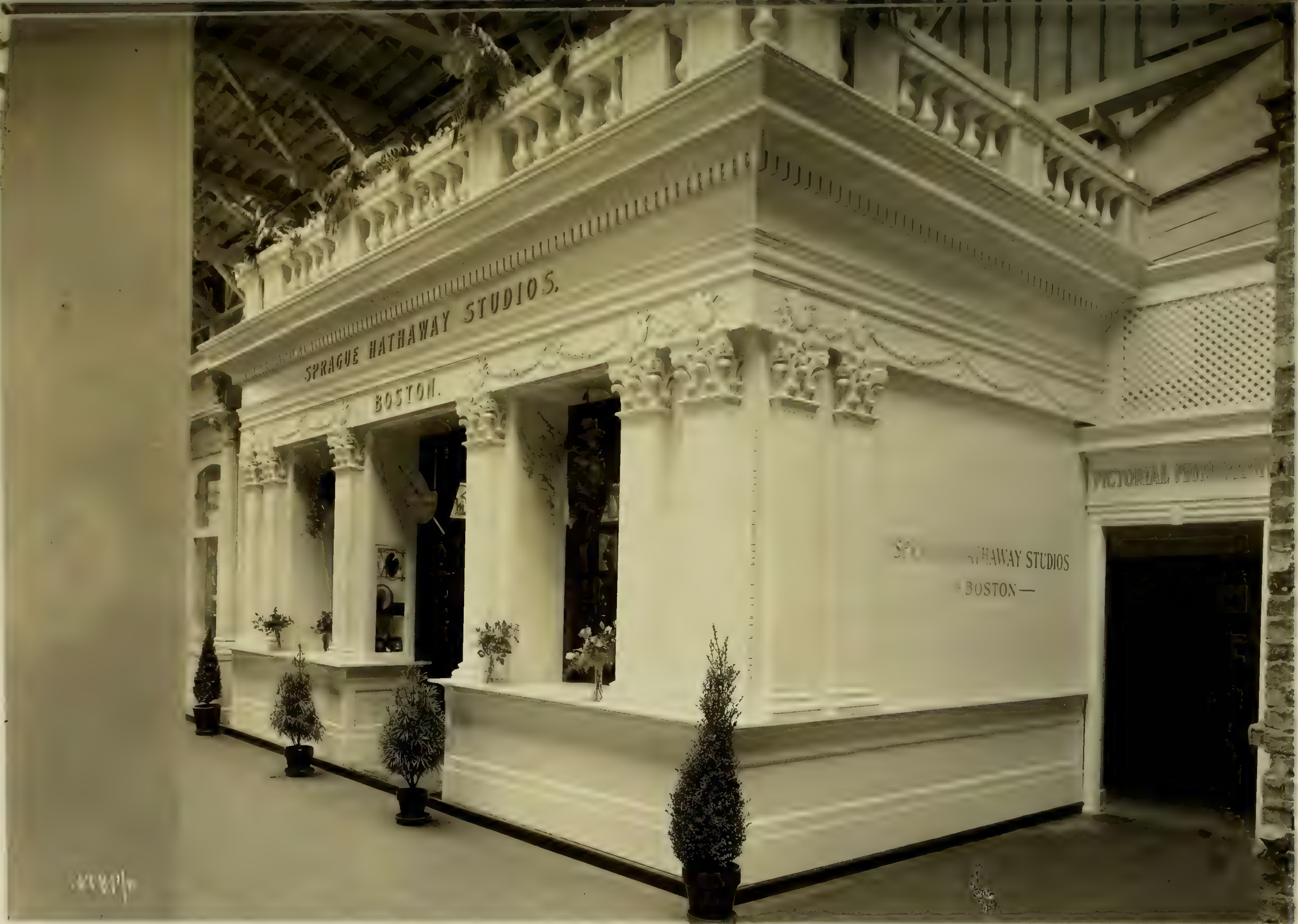
Moving Picture Machines - Nicholas Power Company

E. N. Sewell exhibited a complete line of scenic photographs, the greater part of which were of views in and around San Francisco.

The Simplex Photo Products Company showed a small moving picture camera for the amateur and also materials, covering motion picture projectors, motion picture printers and developing outfits, multiplex enlarging lamps, shutters, lenses, tripods and "Northen Light" for taking pictures at night. They also showed a very fine line of fiber curtains. The particularly interesting feature of this camera is that at the low price of $35 it is within reach of people of modest means.

The Sprague-Hathaway Company of national reputation presented a most beautiful exhibition of high grade portraiture, photographic enlargements and hand carved frames. Sepia enlargements being one of the most successful accomplishments of this Company, many beautiful illustrations were shown.

W. E. Worden exhibited a large collection of gray toned scenic photographs of views in and around San Francisco, also some splendid specimens of Exposition architecture.



Sprague-Hathaway Studios

Albert A. Jacobson had an exhibit of "Aratone", a Japanese photographic tissue. The print is made on thin paper in soft tones, and by using different colored paper in back of same, a very artistic effect may be obtained, such as giving a warm tone to marble columns, a hint of blue to the sky or an illusive green to the sea. To some extent this late invention has revolutionized photographic printing.

The Precision Machine Company had a wonderful exhibit of motion picture projectors in model operating rooms, many of which were located in the Palace of Education.

The Vanoscope Company had a very interesting exhibit of motion picture projectors.

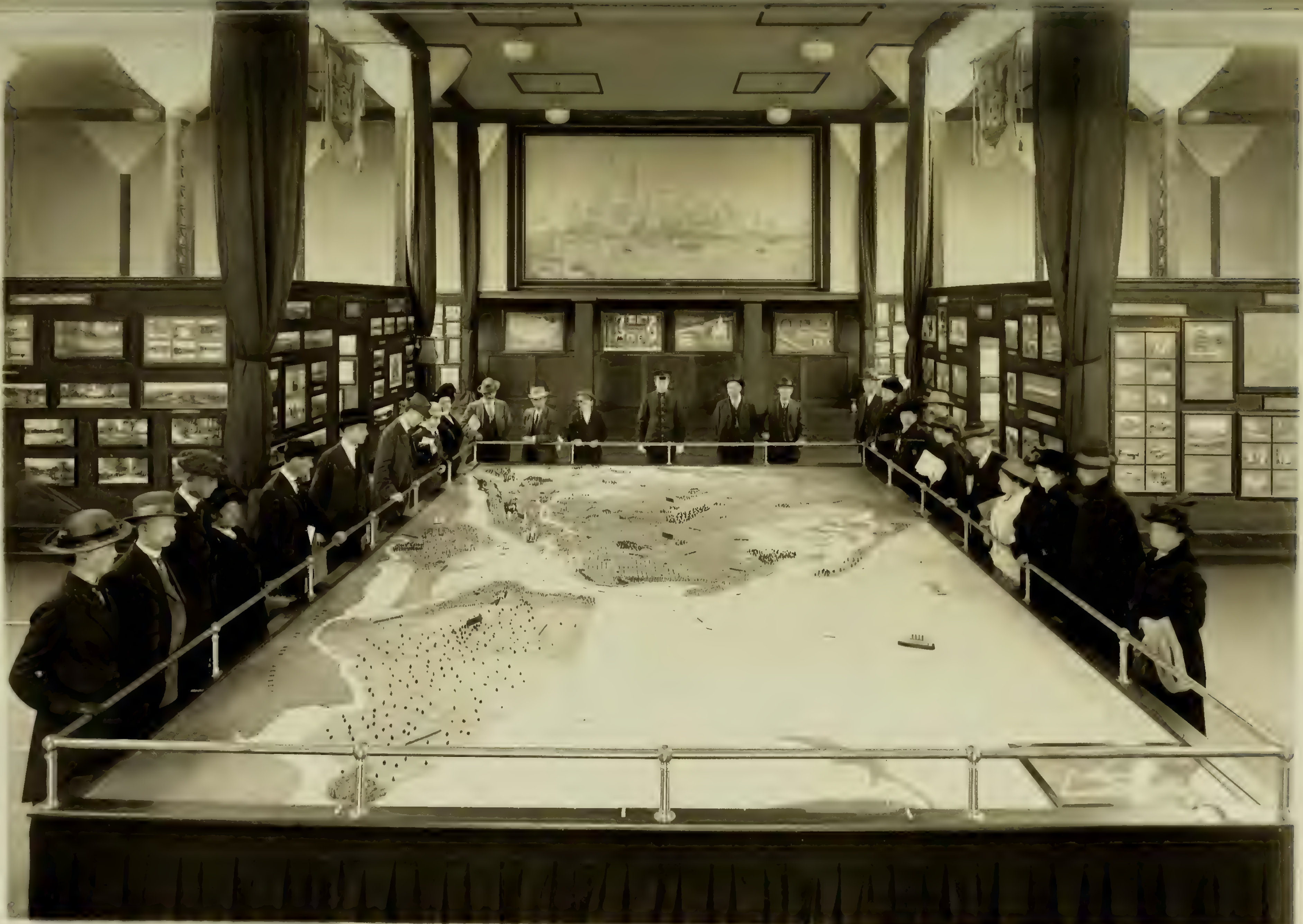
The Westinghouse Electric & Manufacturing Co. had a very attractive exhibit of motor generator sets and controls for moving picture machines. These were located in the Machinery and Transportation Palaces.

The Pictorial Photography Gallery was the largest and most effective exhibit of photography, being under the direction of the Department of Liberal Arts. This was a collection of photographs selected by a special committee

before the opening of the Exposition, and representing many leading amateurs, as well as professional photographers of distinction. Particularly interesting in this exhibit were the pictures of Mrs. Anne Brigman and Bianca Conti - the former winning the Grand Prize, and the latter, the Medal of Honor.

The State Buildings offered a fine exhibition of photography that classified under the Department of Liberal Arts, and were judged by that Jury. Those attracting most attention and winning first prize were located in the City of New York Building, giving a wonderful photographic illustration of their civic life.

Other exhibits worthy of mention in this Photography Group were those of Miller, Artist, Gustave Bauman, Marcus Benjamin, Mary A. Booth (specializing in photomicrographs), Boselman & Company, Chas. Boussum, W. E. Dassonville, Francis Bruguiere, David Davidson, and the General Electric Company showing a fine display of X-Ray photography on glass. Anna Hosea showed some very splendid portraiture, as did Isa M. Howard of the same City. The State of Montana had fine photographs on display as well as cycloramas, located in the Palace of Agriculture. Anna Thatcher and Thompson & Schoetner both had attractive displays of colored photographs.



City of New York Photographs and Model Map

#34
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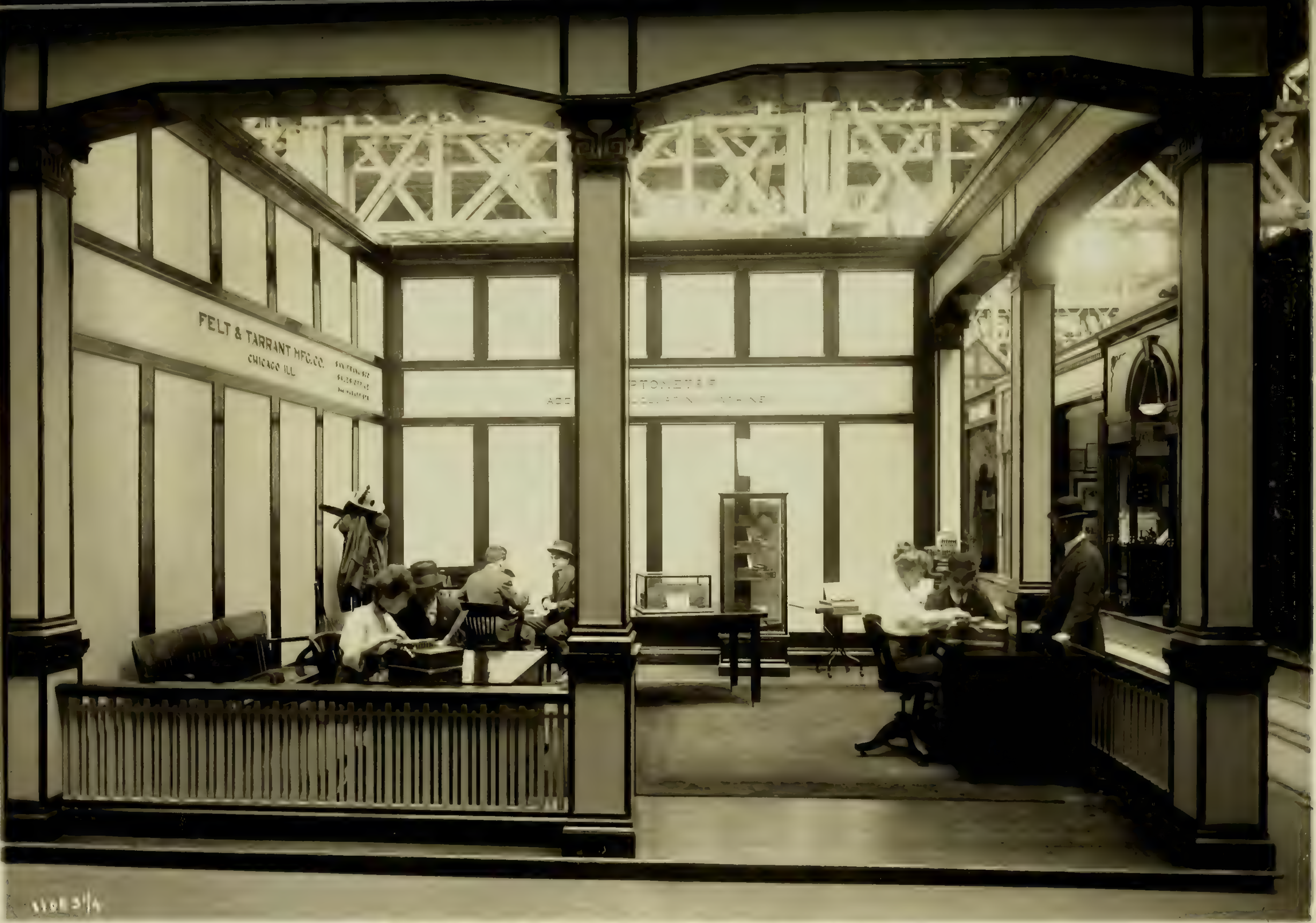
D MEDALS.

Felt & Tarrant Manufacturing Company had an exhibit of adding and calculating machines, featuring the "Comptometer", which is operated by the keys alone and performs accurately all additions, multiplications, divisions and subtractions found in bookkeeping, pay-roll, cost-keeping, billing and all accounting departments of mercantile, manufacturing, insurance and railroad institutions. There is also an exhibition models showing the evolution of the calculating machine from the first keyboard machine, which was made in 1884, and which was the beginning of the American adding machine industry, down to the present machine; also the first adding machine ever exhibited at a World's Fair.

The Angldile Computing Scale Company carried a miscellaneous line of computing scales, and from an artistic standpoint were in advance of any of the types shown in the Exposition, although they did not receive the highest consideration on the Jury of Awards.

Bausch & Lomb Optical Company of national reputation carried a complete line of optical instruments and optical goods of all descriptions, including



Felt & Tarrant Comptometer Exhibit

surveying instruments, photographic lenses, hospital equipment, such as magnifying apparatus for laboratory use, etc. Their surveying instruments were far ahead of any others exhibited as they have had greater advancement in this line than any other firm.

John A. Brashear Company exhibited in connection with Warner & Swasey Company, showing a splendid line of telescope lenses and microscopic instruments.

The Burroughs Adding Machine Company had on display their famous line of adding, subtracting and calculating machines used in all lines of business, and by all nations of the world.

The Coin Machine Manufacturing Company had on exhibit coin handling devices such as turnstile and slot machines.

The Dalton Adding Machine Company displayed a complete line of calculating and adding machines and adding typewriters.

W. & L. E. Gurley carried a complete line of civil engineers' and surveyors' instruments, standard weights and measures and guaranteed accurate

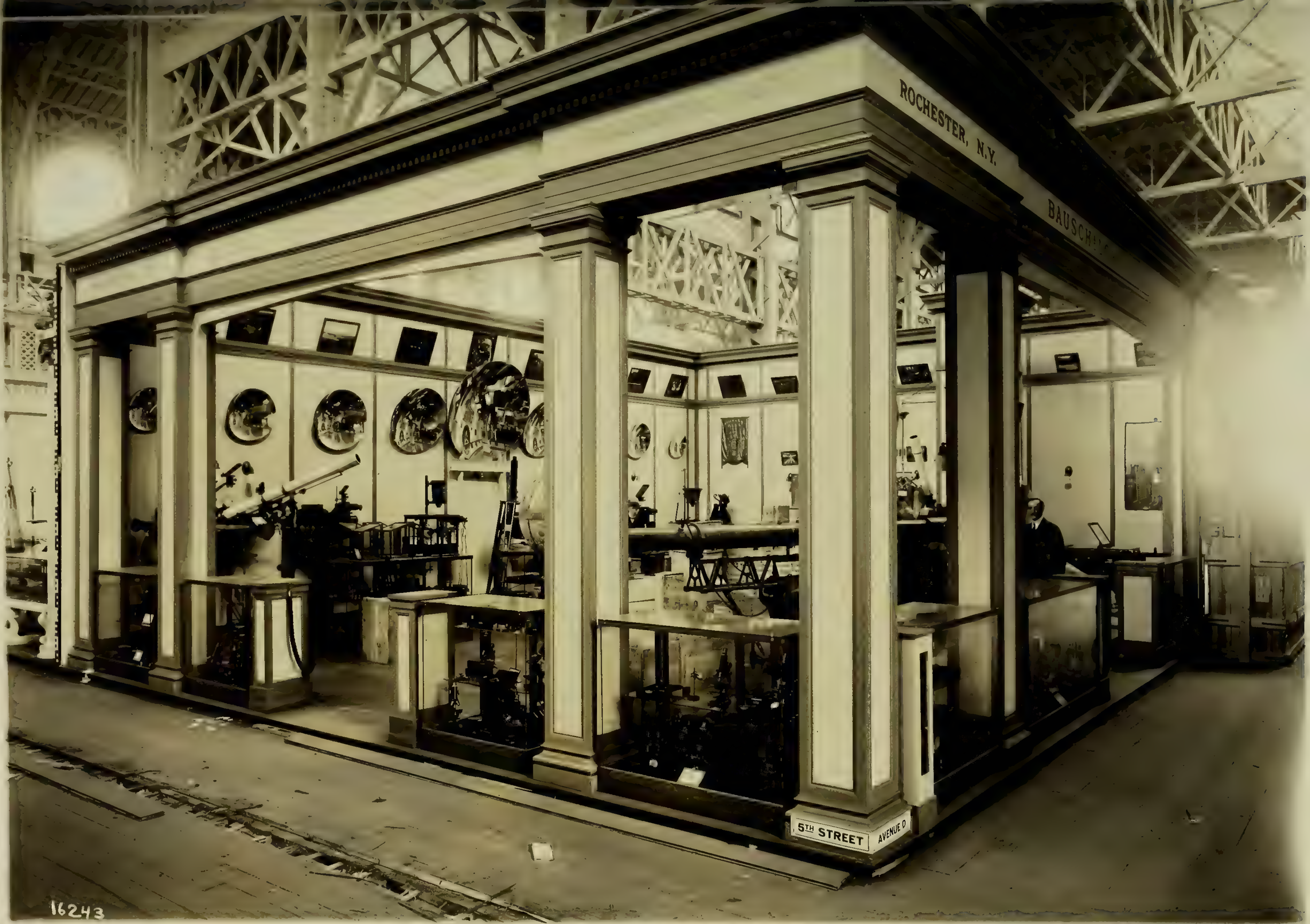
thermometers. A particular branch in which this Company has won a national reputation, and perhaps on which they specialize more than any other exhibitor, is their hydraulic instruments. These instruments were given high consideration for instruments of this kind.

The Keuffel & Esser Company is another firm that has won national reputation, specializing in their particular commodities, better known to the engineering profession; there is hardly an instrument required in the engineering line that is not carried by this Company.

The A. Lietz Company displayed a very complete and first class line of nautical and surveying instruments. As a Coast concern, they are perhaps further advanced than any other similar company. Their nautical instruments were especially good.

The Marchant Calculating Machine Company, as the name implies, had a very fine machine which could be operated either by hand or by electricity.

The National Cash Register Company had a very fine exhibit of cash registers, holding a prominent



Bausch & Lomb - Scientific Instruments

location in the center of the Liberal Arts Palace. Their welfare work was demonstrated by moving pictures and a lecture given in a prettily furnished auditorium, while the exhibit consisted of the famous cash register, and the parts used in their manufacture showing the work from the beginning to the finished product. Their automatic registering attachments were a feature recently invented by this Company, and showed in no small way the efficiency of a cash register run automatically.

The Toledo Scale Company had a particularly attractive exhibit in the center of the building of weighing machines, automatic springless, computing, heavy capacity, dormant and portable scales for factory use. Also person weighingmachines, parcels post and laboratory scales.

The Warner & Swasey Company with their splendid exhibit of scientific and astrological instruments was a most attractive display. The great telescope, the seventh largest in the world, stood directly under the center dome of the Palace of Liberal Arts. This unusual exhibit caused no little comment from visitors. As it had been made

especially for the Chabot Observatory in Oakland, California, it was removed there shortly after the close of the Exposition.

The Shore Instrument & Manufacturing Company was a Liberal Arts exhibitor in the Palace of Machinery. They exhibited a complete line of testing instruments such as pyroscopes, used for testing light and heat in steel and iron.

The Barcharach Industrial Instrument Company had a very interesting exhibit of recording gauges. This Company was also located in the Palace of Machinery.

The Bristol Company was also a good exhibit of temperature recording and meteorological instruments, speed recorders and wet and dry bulb recording thermometers and hygrometers.

The DeZeng-Standard Company had a fine disply of their optical instruments.

The Spencer Lens Company had a very fine display of microscopes located in the Palace of Mines.

Tinius Olsen Testing Machine Company had a complete line of testing machines used in laboratory work.

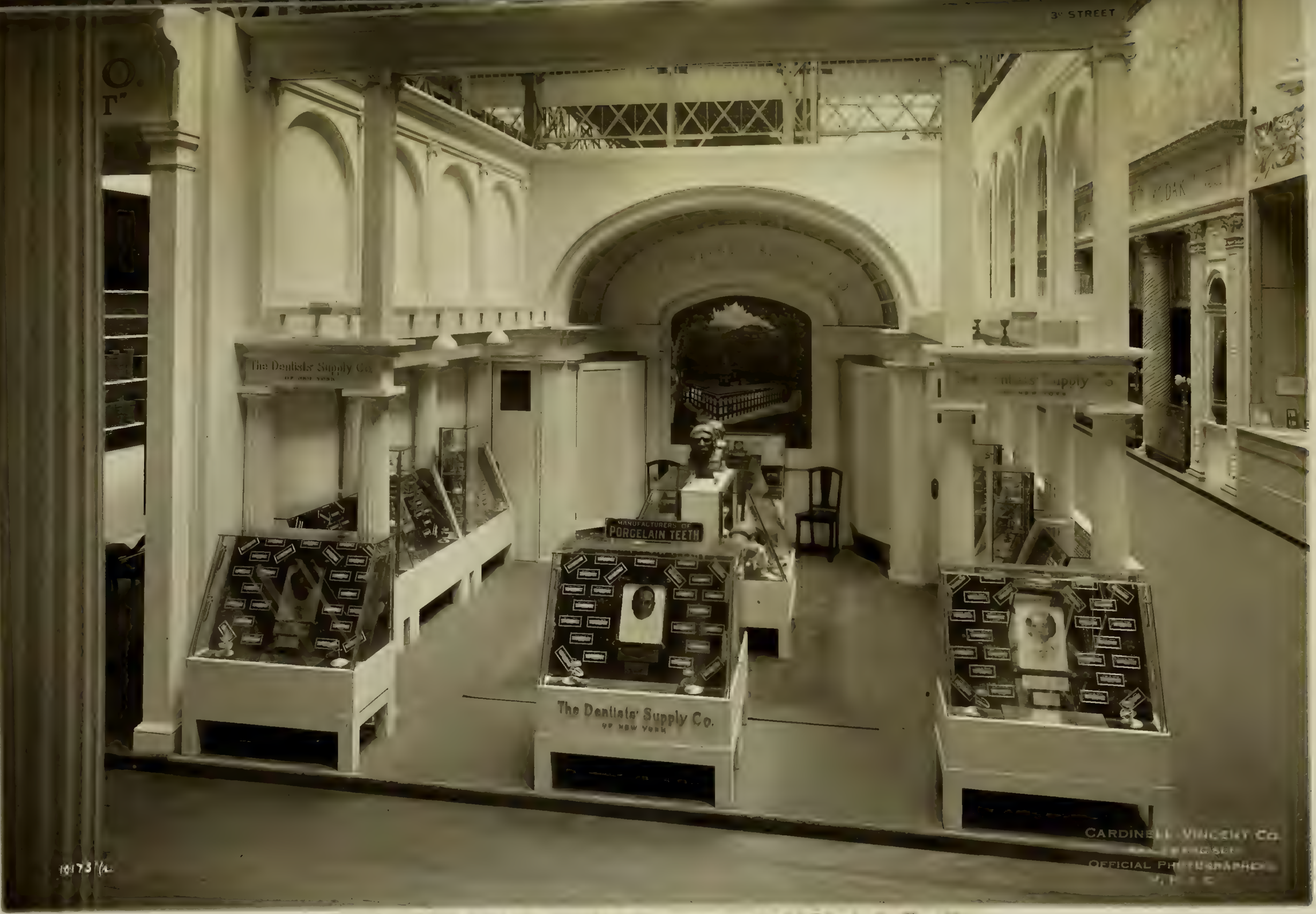
#35
AND
CY.

The Campbell Electric Company's display contained X-Ray and high frequency apparatus; 15 K.W. interruptless transformer in which it is possible to change the cycles from sixty to thirty, thus enabling the operator to do both fluoroscopic and radiographic work; tube tilt table suitable for complete examination or treatment by X-Ray in all its methods of application; stereoscopic compression tube stand and apparatus for electrical treatments of various kinds.

The Dentists' Supply Company displayed a full fine of articicial teeth, with pictures showing the different types of faces and the method by which teeth are selected to harmonize with each type. An interesting feature of the exhibit is J. Leon William's collection of plaster casts of skulls of pre-historic man, which was brought from the American Museum of Natural History in New York.

Wizard Foot Appliance Company's exhibit showed a display of arch supports with charts of feet illustrating how flat feet are corrected; also materials used in making arches.

The A. A. Marks Company had on display artificial limbs, crutches and invalid rolling chairs.


3rd STREET
The Dentists' Supply Co. of New York
MANUFACTURERS OF PORCELAIN TEETH
The Dentists' Supply Co. of New York
CARDINELL-VINCENT CO.
SAN FRANCISCO
OFFICIAL PHOTOGRAPHERS
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The Dentists Supply Company, Artificial Teeth

A. Schrader's Son, Inc. had a very interesting exhibit. A particular feature was a working model of a diving apparatus showing the bust of a diver's armor in a glass tank filled with water illustrating how air is supplied to them by means of a pump; also a telephone connection, knife, electric light accessories. The exhibit also includes gauges for measuring water pressure and tire pressure, coupling ferrule and hot water stoppers.

The Harvard Company's display of dental furniture, included nine varities of cabinets, chairs with supplementary seat for children, and an electric switch board used to convey current for the operation of the different dental appliances was an interesting as well as an educational exhibition.

The Stevens Health Inventions Company embracing breathing and inhaling outfits, semi-automatic pumps, sprays, alcohol-gas stoves, which make and burn their own gas, electric light bath cabinets and complete hydro-electro mechano therapeutic outfits, was of great interest to the medical profession. Free demonstration was given to anyone who desired, nurses being in attendance at all hours of the day.

The Carnes Artificial Limb Company's display of artificial arms and hands made of willow fiber, with raw-hide cords used as muscle attached to supporters stretched across the back to give tension showed a marked improvement along these lines. Demonstrations at the booth were astonishing over the many things that could be accomplished with these artificial limbs.

Aunger Artificial Limb Company also exhibited a line of both artificial limbs and arms and appliances for the deformed, with models showing how they were used.

The Columbus Dental Manufacturing Company had on display a splendid exhibit of dental goods - interchangeable, artificial teeth for crown and bridge work; interchangeable facings; interchangeable posteriors, bridge-work models; rugapaks, also an exemplification of the making of a plate from the wax model to completion, and the making of teeth from the raw materials to the finished teeth.

The Marcon Company exhibited spring arch supports, with skeleton and models of feet, showing the use of the arch; also the materials and the making of the supports.

Johnson & Johnson's display of surgical dressings, medicinal plasters, illustrations and charts showing first aid treatments, also views from the laboratories and model of plant where the products are made, was of great interest to the public.

Clark Gandion Truss Company had on display abdominal supporters and reducers, suspensories, jock straps, with their uses illustrated on models of limbs, etc.

The Chicago Artificial Limb Company had a very complete line of artificial limbs as compared to other artificial limb companies. According to the judgment of the experts, professional men in this line, there are very little new or late inventions in artificial limbs, and for that reason there are very few firms that specialize in this line.

The Indexo Company was one of the late installationsof exhibits. Their product is the latest invention in tooth brushes, being a small piece of rubber covered with bristle-like projections which fits over the end of the index

finger. This article from a sanitary and hygienic standpoint has every merit, the chief quality lying in its treatment of massaging the gums without scarifying or irritating same.

The Ohio Chemical & Manufacturing Company had a very complete but modest exhibit. To the professional man it was complete in all details requiring anesthesia treatment, with a full line of apparatus for producing same. This was demonstrated in the Exposition Hospital and proved very successful, authorities on the subject declaring it the best on the market.

The Scheidel Western X-Ray Company, as noted by the name,carried a very complete line of X-Ray apparatus, with a working exhibit in the Exposition Hospital. Their exhibit consisted of apparatus for producing the X-Ray for radiography, fluoroscopy and therapy, with all the working parts, supplies and accessory apparatus.

The Troeger Manufacturing Company, an exhibitor of foot appliances and arch supports of all descriptions, carried a complete line in their exhibit,

and for the professional this was a field where many things could be learned regarding the taking care of the feet by arch supports.

The Victor Electric Company's working exhibit in the Hospital showed their complete line of X-Ray and Electro-Medical apparatus. Particularly interesting to visiting physicians were their Victor Bone Surgery Engine; Victor Combistat; Victor Giant Magnet; Victor Electric Centrifuge; Victor Vibrator and numerous other devices.

The Aladdin Company, of New York City, exhibit in Machinery Palace, contained a complete line of therapeutic apparatus, considered to be one of the most representative of the American firms.

American Sterilizer Co., of Erie, Pa. This exhibit carried a full line of sterilizers, disinfectors and had a complete working exhibit in the Exposition Hospital which consisted of a combination of electric heated dressing water utensil and instrument sterilizers.

Armstrong Cork Co., Pittsburgh, Pa. Had a very complete and unique line of druggists' corks displayed in the Manufactures Palace, giving the history of the cork from its origin to the completed product used for all purposes.

Aseptic Products Co., of Long Island City, N. Y. This exhibit carried a complete line of liniments, liquids, etc.

Bausch & Lomb Optical Co., of Rochester, N. Y. These people also had a working exhibit in the Exposition Hospital with such hospital equipment as plates, magnifying glasses and other apparatus. This was considered one of the most complete lines of its kind manufactured in the United States.

V. Berger Co., of New Haven, Conn. This Company confined its line to surgical supports, and carried the highest priced and most complete line in the United States. Their representation was better known to the medical profession.

George W. Brady & Co., of Chicago, Ill. This Company specialized in Paragon X-Ray plates and had a very fine working exhibit in the Exposition hospital.

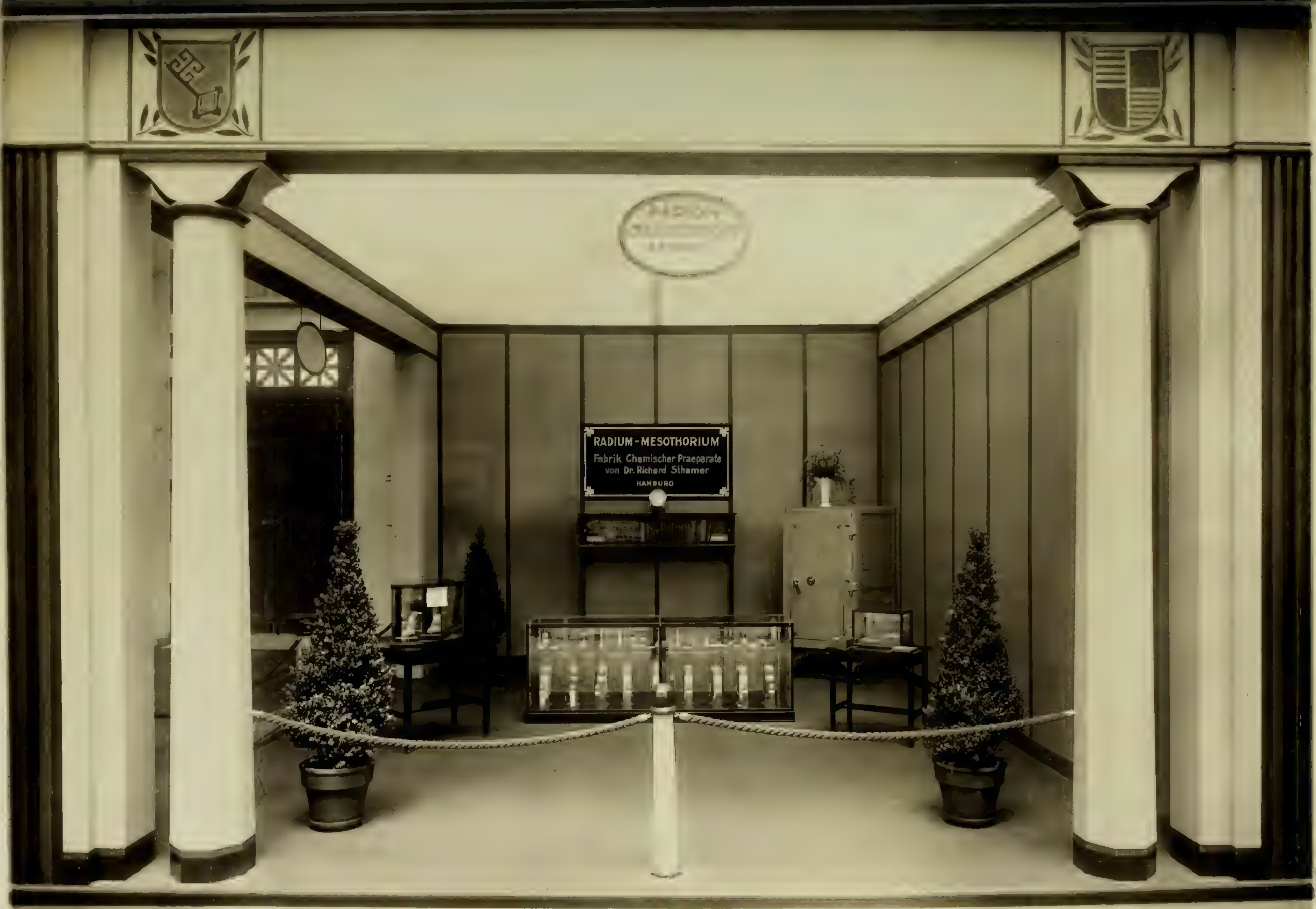
The Bristol Company, of Waterbury, Conn. This Company's name needs no commendation, the quality of blood pressure gauges and other similar appliances that they carried being used all over the civilized world.

The Carborundum Company, of Niagara Falls, N. Y. This is one of the largest houses in the United States carrying a full line of dental equipment.

Craig Dental Manufacturing Co., Inc., of Wilkinsburg, Pa. A special line of bridge tooth and dental accessories was carried by this Company.

DeZeng-Standard Company, of Camden, N. J. This firm, in conjunction with the Globe Ear Phone Co., carried a special line of surgical diagnostic equipment and electrically lighted eye, ear, nose and throat diagnostic instruments.

Draeger Oxygen Apparatus Co., of Pittsburgh, Pa. This Company had a working exhibit in the Exposition Hospital. This firm is too well known for oxygen apparatus to need any commendation of any of their products.



Dr. Richard Sthamer's $300,000 Radium - Mesothorium

Electro Bleaching Gas Co., of Niagara Falls, N. Y. This firm had a complete line of sterilizing apparatus. Their exhibit was very attractive and an educational one.

The Ellanem Co., of New York City. This Company carried a full line of heaters containing solidified alcohol. This was a very attractive and unique exhibit and attracted much attention from the medical profession.

The Foxboro Company, of Foxboro, Mass. This Company had a special line of medical thermometers, very few people realizing the extent of this line of product. This exhibit was in Machinery Palace.

Gantner & Mattern Co., of San Francisco, Calif. This Company showed at their exhibit a complete line of silk and wool abdominal bands.

General Bakelite Co., of New York City. An exhibit of thenol products.

General Electric Co., of Schenectady, N.Y. This Company exhibited, in connection with their "Home Electrical" the Coolidge X-Ray tubes and gold-coated Tungsten wire used by the medical profession. For an exhibit of this kind it was one

of the most instructive and educational to the profession in the Department.

Hanovia Chemical Co., of Newark, N. J. An exhibit of electro-therapeutic lamps. There was no end to the number of styles of these lamps, which showed that they are manufactured to no small extent. The exhibit showed the possibilities of a lamp of this kind as used by the medical profession.

F. A. Hardy & Co., of Chicago, Ill. An exhibit of surgical and aural instruments.

Wm. H. Horn & Bro., of Philadelphia, Pa. An exhibit of surgical goods. This Company carried a fairly representative line of surgical goods applying to artificial limbs and abdominal bands.

The Industrial Instrument Co., of Foxboro, Mass. This Company specialized on blood pressure recorders and had a very attractive exhibit in the Palace of Machinery.

Life Saving Devices Co., of Chicago, Ill. This was one of the interesting exhibits showing a complete line of lung-motors, pulmotors, etc., some of their products being used in the Palace of Mines in connection with the working of the Mine exhibit showing means of restoring qualities as a working

demonstration of their product.

Lincoln Rubber Co., of Akron, Ohio. This Company had a working Exhibit in the Exposition Hospital, where all the rubber gloves and fingers used were supplied by them.

W. J. Marland, of Oakland, Calif. This was a collective exhibit in which various electrical apparatus was demonstrated, such as small electrical connections used by dentists and in medical laboratory work.

McDermott Surgical Instrument Co., of New Orleans, La. This Company had a small line of surgical appliances in the Louisiana State exhibit in Agriculture Palace.

Meinecke & Co., of New York City. An exhibit of Hospital supplies. They had a working exhibit in the Exposition Hospital.

New York State Hospital Commission, of Albany, N. Y. This Commission had a very fine demonstrating exhibit of the hydrotherapeutic apparatus. This was a most interesting exhibit and was shown a great deal of attention by the medical profession.

Presto Electric Co., Inc., of San Francisco, Calif. This Company had an exhibit of electric lamps used in connection with laboratory work and dental surgery.

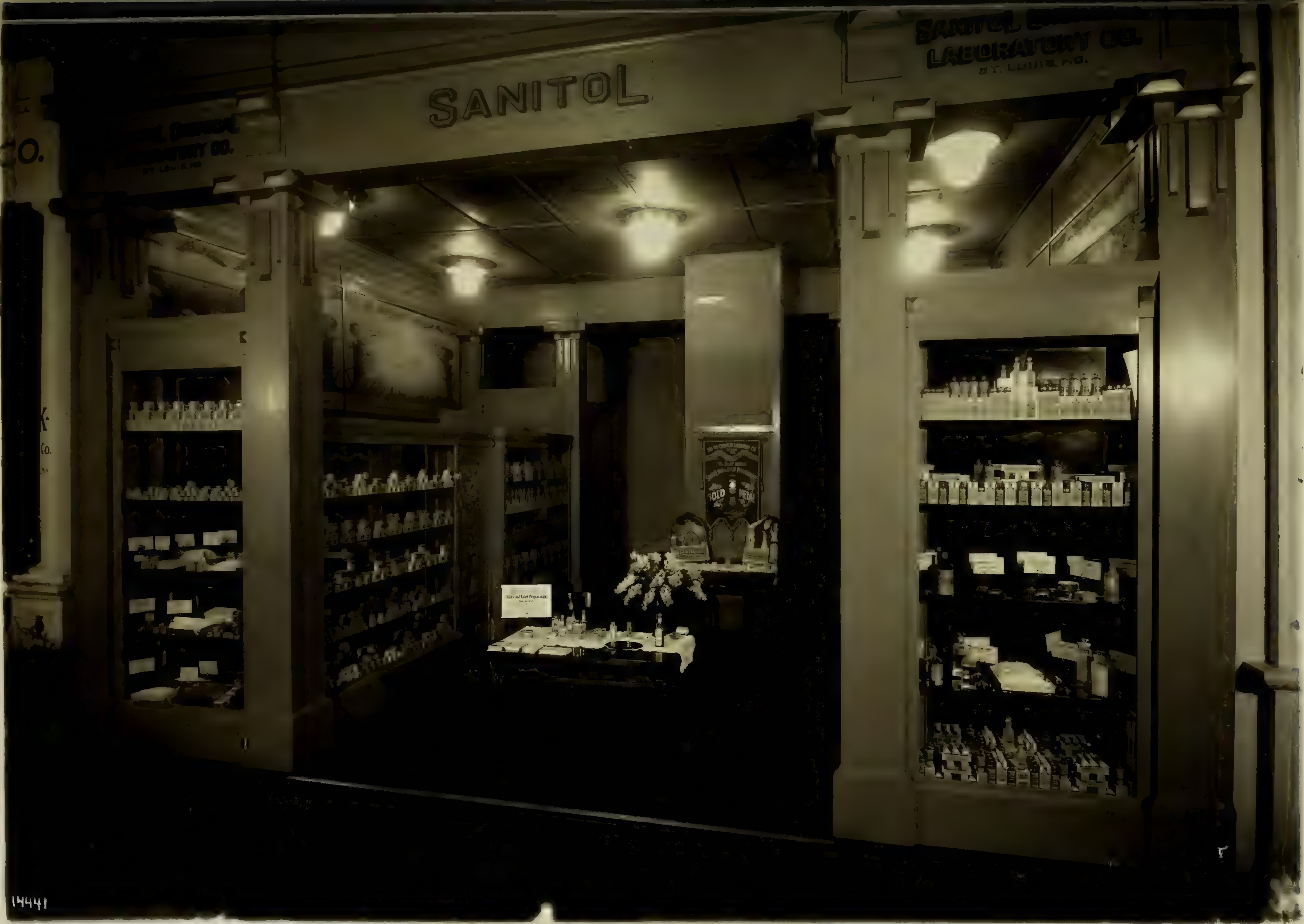
Salem Glass Works, of Salem, N. J. This Company made a specialty of glass instruments and supplies for hospitals. They had a working exhibit in the Exposition Hospital, which was very unique in its class.

Shelton Electric Co., of New York City. In connection with the General Electric Co's. "Home Electrical" had an exhibit of pedestals and portable electric vibrators.

The Smith Co. Topeka, Kansas. In connection with the Clark-Gandion Truss Co. exhibited a complete line of trusses.

Dr. Edmond A. Souchon, of New Orleans, La. This Company had a small exhibit in the Louisiana State exhibit of anatomical preparations.

Taylor Instrument Cos., of Rochester, N. Y. This name is too well known throughout the world for their line of instruments to need any comment. They had a working exhibit in the Exposition



Sanitol Toilet Preparations

Hospital consisting of tycos sphygomanometers, etc. They also had a working exhibit in collaboration with the United States Government exhibits in all Departments. They also had a working exhibit in the Exposition Hospital.

Thordarson Electric Manufacturing Co., of Chicago, Ill. This Company had a very fine exhibit of X-Ray transformers in Machinery Palace.

Uprite Manufacturing Co., of Chicago, Ill. An exhibit of shoulder braces in connection with the exhibit of Clark-Gandion Truss Company.

Westinghouse Electric and Manufacturing Co., of Pittsburgh, Pa. This Company had a splendid exhibit of electric sterilizers, ozonizers and dental lathes in Machinery Palace.

Williams Medical Battery Co., of New York City. As their name implies, carried a full line of these special products, i. e., medical batteries.

American Druggists Syndicate, of New York City. This concern had a collective chemical drug exhibit, which was well represented by many patent medicines of various descriptions. They had perhaps the best exhibit of this kind in the Department.

American Turpentine and Tar Co., of New Orleans. This company had a small exhibit in connection with the Louisiana State exhibit in Agriculture Palace, of turpentine and tar products.

Anti-Uric Co., of San Francisco, Calif. This firm had a nice booth and rather a good exhibit of patent medicines used for the purpose of curing rheumatism.

Avigdar and Rastonoff, of San Francisco, Calif. This Company had a very good line of perfumes manufactured in California. Located in the Spanish Section of Agriculture Palace.

J. T. Baker & Co., of Philipsburg, N. J. This Company had a good line of chemicals, located in the Palace of Mines.

Barrett Manufacturing Co., of Philedelphia Pa. This exhibit consisted of coal tar chemicals, solvents, etc.

E. W. Bennett Co., of San Francisco, Calif. This firm had a fine line of metal polish, with a working exhibit in the Exposition Hospital. Of its kind this polish is perhaps one of the most effective for the purpose on the market, although they did not have a booth exhibit.

F. W. Braun, of Los Angeles, Calif. This was a very fine exhibit of laboratory equipment in the Mining Palace.

Buffalo Specialty Co., of Buffalo, N.Y. This Company had a very good exhibit of the product called liquid veneer, which is used for furniture, automobiles, etc.

Bush Specialty Co., of Buffalo, N. Y. This Company had a special cleaner used for gloves and clothes, exhibit located in Food Products Palace.

Justinian Caire Co., of San Francisco. This Company had a splendid exhibit of laboratory equipment in Food Products Palace.

Laughlin Fruit Refining Co., of Los Angeles, Calif. This Company had a fine working exhibit demonstrating the manufacture of a Citrus Cream and use of same. This is a product that is made of pure lemon rind, used as a face and hand cleanser and for its healing purposes.

California Ink Co., of Oakland, Calif. This Company is one of the largest concerns of its kind in the world, and had a most attractive and instructive exhibit of printing ink showing the

many kinds placed on the market. It is used for newspapers, books, etc.

California Nut Products Co., of West Berkeley, Calif. This firm had a very attractive exhibit in Horticulture Palace consisting of almond oil manufactured by them.

California Perfume Co., of New York City. This Company had a very fine exhibit of toilet requisites.

Channell Chemical Co., of Chicago, Ill. Manufacturers of O-Cedar Products - - oil and mops - - had a very fine exhibit of these products. Their product, O-Cedar, comparing with others of like character, was decided as being one of the best on the market.

Antoine Chiris Co., of New York City. This Company had a very fine exhibit of essential oils and caps - viscose. It was a very unique exhibit and very interesting to the profession.

Clark-Gandion Truss Co., of San Francisco, Calif. This Company had a representative line of obesity reducers and supporters and sanitary suspensories and jock straps.

Clements Manufacturing Co., of Chicago, Ill. This Company had an exhibit of furniture polish in Manufactures Palace.

Jesse B. Conway Co., of Los Angeles, Calif. This firm carried an exhibit of a full line of Dr. Conway's plasters.

Cooperative Metallurgical Exhibit, U. S. Bureau of Mines. This exhibit was a fine working exhibit in the Palace of Mines. They exhibited a cooling and gas washing tower, marble chamber acid system, chemical laboratory apparatus and research laboratory apparatus.

Denny, Hilborn and Rosenback, of Philadelphia, Pa. This Company exhibited stamping inks and it was a very interesting one. Located in Machinery Palace.

Diamond L Manufacturing Co., of Oakland, Calif. This Company had a very good working exhibit of silver paste, used for silver polish and other metals. This is supposed to be the best product of its kind made.

August E. Drucker Co., of San Francisco, Calif. This Company had a very attractive exhibit of Drucker's revelation tooth powder. This is a

powder that is receiving the endorsement of every well known dentist throughout the United States and considering the attention given the product it must be one of the best of its kind.

Eagle Printing Ink Co., of New York City. This Company had a full line of printing ink in Varied Industries Palace.

Electrical Heating Apparatus Co., of New York City. Had an exhibit of electric hot plates, in Palace of Mines.

Emerson Drug Co., of Baltimore, Md. This Company specialized on the well known product Bromo Seltzer and had a very good exhibit in the Department of Liberal Arts.

F. W. Fitch Co., of Boone, Iowa. This Company had a fine exhibit of toilet preparations, such as hair tonics, etc.

General Bakelite Co., of New York City. An exhibit of bakelite.

General Electric Co., of Schenectady, N. Y. As mentioned in Group 35, had in connection with their exhibit "Home Electrical", vacuum and gas filled lamps, vacuum furnaces, etc. and an exhibit of miscellaneous laboratory apparatus, production and purification of argon and nitrogen.

Graton and Knight Manufacturing Co., of Worcester, Mass. Exhibit of belt cements and dressings in Palace of Machinery. This is about the only exhibit of its kind in the Department and attracted no little attention.

Hitt Fireworks Company, of Seattle, Wash. This company had a very fine exhibit of modern fireworks. They gave daily demonstrations in the Yacht Harbor. Exhibit in the Mines Palace.

George William Hoffman Co., of Indianapolis, Indiana. This Company had a very complete line of metal and sideboard polishers, perhaps the most varied line of its kind in the Department.

International Acheson Graphite Co., of Niagara Falls, N. Y. This firm had an exhibit of graphite and a very interesting one, in the Palace of Mines. It showed the use of this product in its various forms.

Jefferson Distilling and Denaturing Co., of New Orleans, La. This Company had an interesting exhibit of alcoholic products, in Agriculture Palace.

Katz and Besthoff, of New Orleans, La. This Company had a small exhibit in connection with the Louisiana State exhibit in Agriculture Palace, of toilet articles.

Kelly Filter Press Co., of Salt Lake City, Utah. This Company had a very interesting exhibit of filter presses in Machinery Palace, showing the different styles of this article.

Koken Barber Supply Co., of St. Louis, Mo. Manufacturers of De Luxe hair tonic and other toilet articles, exhibited in Manufactures Palace.

La Balliere Co., of New Orleans, La. This Company had a very complete line of perfumes and toilet specialties, in connection with the Louisiana State exhibit in Agriculture Palace.

Leroy's Perfumes, of San Diego, Calif. This was a small exhibit of California made perfumes.

Frederick H. Levey Co., of New York City. This Company had a full line of printing inks on exhibition in Machinery Palace, showing the various forms of applying this product, which made a very interesting display.

Los Angeles Soap Co., of Los Angeles, Calif. This Company had an attractive line of soaps in Agriculture Palace.

I. L. Lyons & Co., of New Orleans, La. Had a representative line of pharmaceuticals, exhibited in Agriculture Palace.

Robert Mayer & Co., of New York City. This Company had a collective exhibit of printers ink, lithographing inks, bronzing machines, Parks lithographic hand presses and lithographing machinery, in Machinery Palace.

R. F. McMichael, of Seattle, Wash. A new invention of a machine for the special purpose of determining the vicosity of liquids. It was told by experts that this new machine had revolutionized the method of determining the vicosity of liquids. They collaborated with one of the Government exhibits.

Merck & Co., of New York City. This name is so well known that it hardly needs any recommendation. The exhibit carried a complete line of chemicals, in Mines Palace.

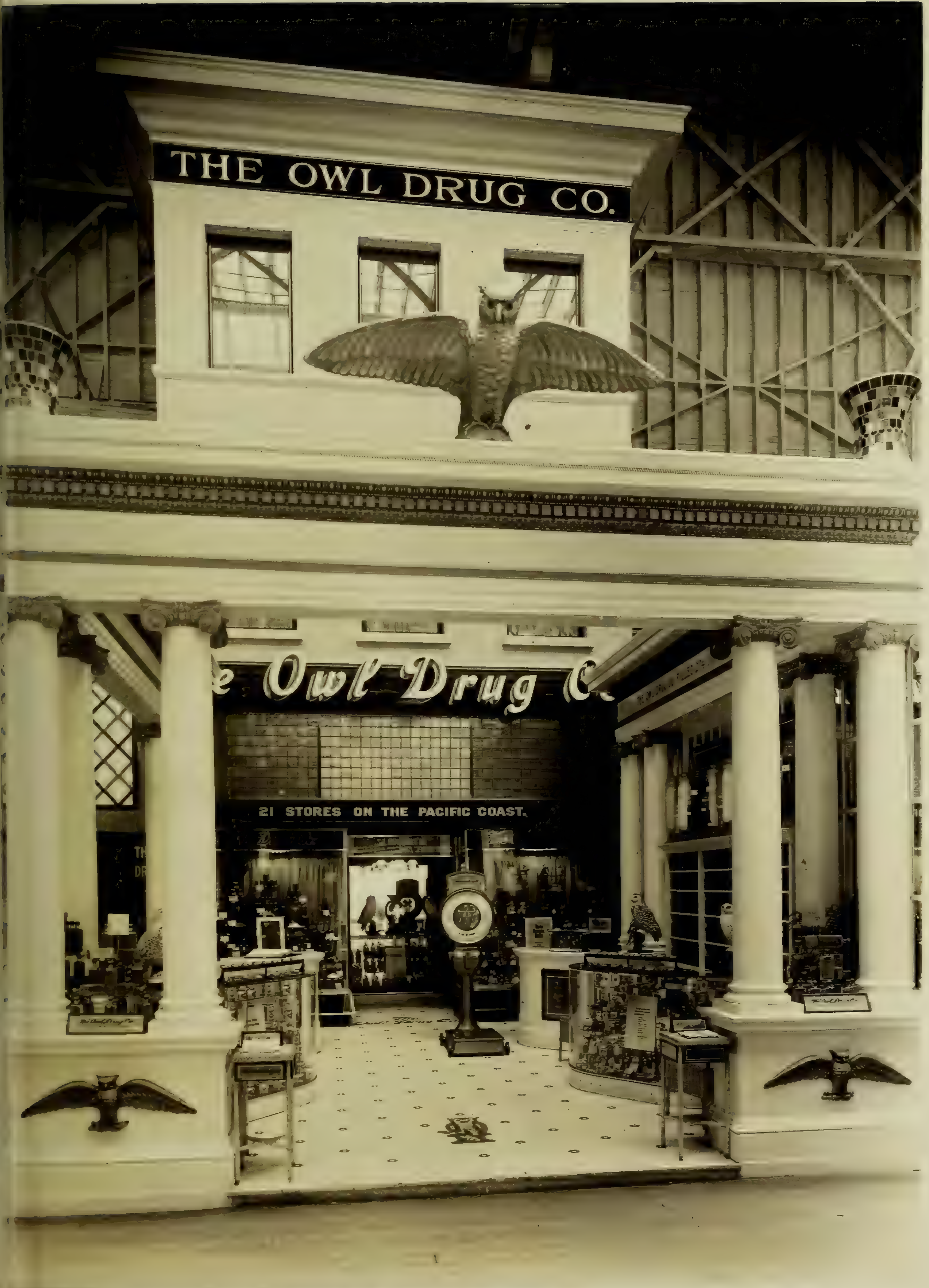
C. E. Meriweather, of Louisiana. This Company showed a very interesting exhibit of alcohol distillation, in Agriculture Palace.

Myrlite Company of America, of Pownal, Vermont. This Company had a very fine exhibit of soaps, both in liquid and cakes, in Manufactures Palace.

Orion Laboratories Co., of Long Island City, N. Y. This Company had a complete line of chemical and pharmacal articles.

Orona Manufacturing Co., of Boston, Mass. This Company had a varied line of Orona cleaning products.

O-So-Easy Mop Co., of Detroit, Mich. This Company had a line of Cedar oil polish and mops, like the O-Cedar oil, used for the same purpose, i. e., polishing furniture, automobiles, etc.



The Owl Drug Company

Owl Drug Co., of San Francisco, Calif. This Company had a very fine exhibit of a retail drug store, showing the outside of same and a very complete interior installation. This exhibit proved a very interesting one and did no end of good for many sick people and others in search of medical information in the Department of Liberal Arts. This Company showed on its records that it had contributed to the ailments of at least 18,000 people during the course of the exhibit.

Pacific Ammonia Bottling Co., of San Francisco, Calif. This Company had a very complete line of washing ammonias, specializing in Greer's washing ammonia.

Pacific Ammonia and Chemical Co., of Seattle, Wash. This Company had an exhibit of liquid and anhydrous ammonia.

Pacific Pine Needle Co., of Oakland, Calif. This Company had a varied line of pharmacal products.

S. P. Pennick & Co., of Marion, N. C. One of the most complete and interesting exhibits of crude drugs. This was a most unique exhibit and attracted no end of attention from both the medical profession and layman.

Pine Products Co., of New Orleans, La. This Company had a full line of pine products.

Pitman, Moore Co., Indianapolis, Ind. This firm had a very interesting miscellaneous line of biological products.

Plapal Laboratories Co., Inc. of St. Louis, Mo. This Company exhibited apparatus for hernia.

Primos Chemical Co., of Primos, Pa. This firm had a working exhibit in the Palace of Mines of molybdenum, vanadium and tungsten.

Radium Therapy Corp., of New York City. This Company had a very interesting exhibit of radium-rem outfits, such as porous terra cotta rods and tablets for charging water with radium, emanation to produce radio-active mineral waters of uniform strength for treating gout and rheumatism. Radio-rem charges water in the same way as the natural active springs are charged by contact with radium minerals.

George Russell Reed Co., of San Francisco, Calif. This Company had a collective exhibit of printers ink and supplies, such as photo-engravers machinery and other apparatus and

machinery for printing, photo engraving and photographic purposes.

Paul Rieger & Co., of San Francisco, Calif. This Company had perhaps the most beautiful exhibit of perfumes in the Department, showing a complete line of California perfumes and extracts.

Roessler and Hasslacher Chemical Co., of Perth Amboy, N. J. This Company had a full line of chemicals.

Roseen Toilet Co., of San Francisco, Calif. This Company had a line of toilet specialties particularly a face massage liquid.

Rusknot Co., of Oakland, Calif. Had an exhibit of a liquid used for rust prevention for machinery and tools.

Walter D'Arcy Ryan, of Schenectady, N. Y. An exhibit of fireless fireworks. A working exhibit on the Exposition grounds pronounced by the world's authorities as being the most elaborate lighting and fireless fireworks demonstration ever exhibited at any Exposition.

Safe-T-Cross Manufacturing Co., of San Francisco Station of Bureau of Mines. This concern had a very interesting and entertaining exhibit of chemical laboratory apparatus, in Palace of Mines.

Sanitol Chemical Laboratory Co., of St. Louis, Mo. This firm had a fine exhibit and a very attractive one of Sanitol tooth powder and Sanitol toilet preparations, blue being the dominating color of the exhibit.

Solvay Process Co., of Syracuse, N. Y. This was a rather interesting exhibit of alkali products manufactured by this well known establishment. This Company is one of the largest of its kind in the world.

Standard Oil Co., of New York. San Francisco, Calif. An exhibit of candles for various purposes such as for banquets, coach, domestic, Christmas, church, mining and paraffine wax for sealing.

Joe Stern Company, of Butte, Montana. Had an exhibit of toilet preparations.

Stumpf's Sons, of Algiers, La. An exhibit of a varied line of insecticides.

L. H. Sweetser, of New York City and San Francisco, Calif. An exhibit of a five-in-one polish.

Texas Oil Co., of New Orleans, La. An exhibit of refined petroleum in connection with Louisiana State exhibit in Agriculture Palace.

Union Oil Co., of San Francisco, Calif. An exhibit of miscellaneous line of asphalt products for coating patent leather, etc.

Union Sulphur Co., of Sulphur, La. This Company had an exhibit of sulphur in the Agriculture Palace.

U. S. Gutta Percha Paint Co., of Providence, R. I. An exhibit of Rice's mill white, in varied Industries Palace.

Vermilax Co., Inc., of New York City. This Company exhibited a complete line of dog remedies and accessories.

West Coast Soap Co., of Oakland, Calif. This firm had a complete line of toilet soap.

West Disinfecting Co., of New York City. This Company exhibited disinfectants and insecticides and a full line of the apparatus for using same.

Western Carbonic Gas Co., of Agnew, Calif. A carbonic gas exhibit and various apparatus used therefor.

Westinghouse Electric and Manufacturing Co., of Pittsburgh, Pa. This Company exhibited a line of glue pots, cookers, etc.

Walter N. Willett, of San Francisco, Calif. Exhibited a line showing the manufacture of their product, called Camelline, and their toilet requisites. Camelline is used as a face wash, and is one of the well known products of the country made in California.

Wizard Products Co., of Chicago, Ill. Exhibited a fine line of floor and furniture oils.

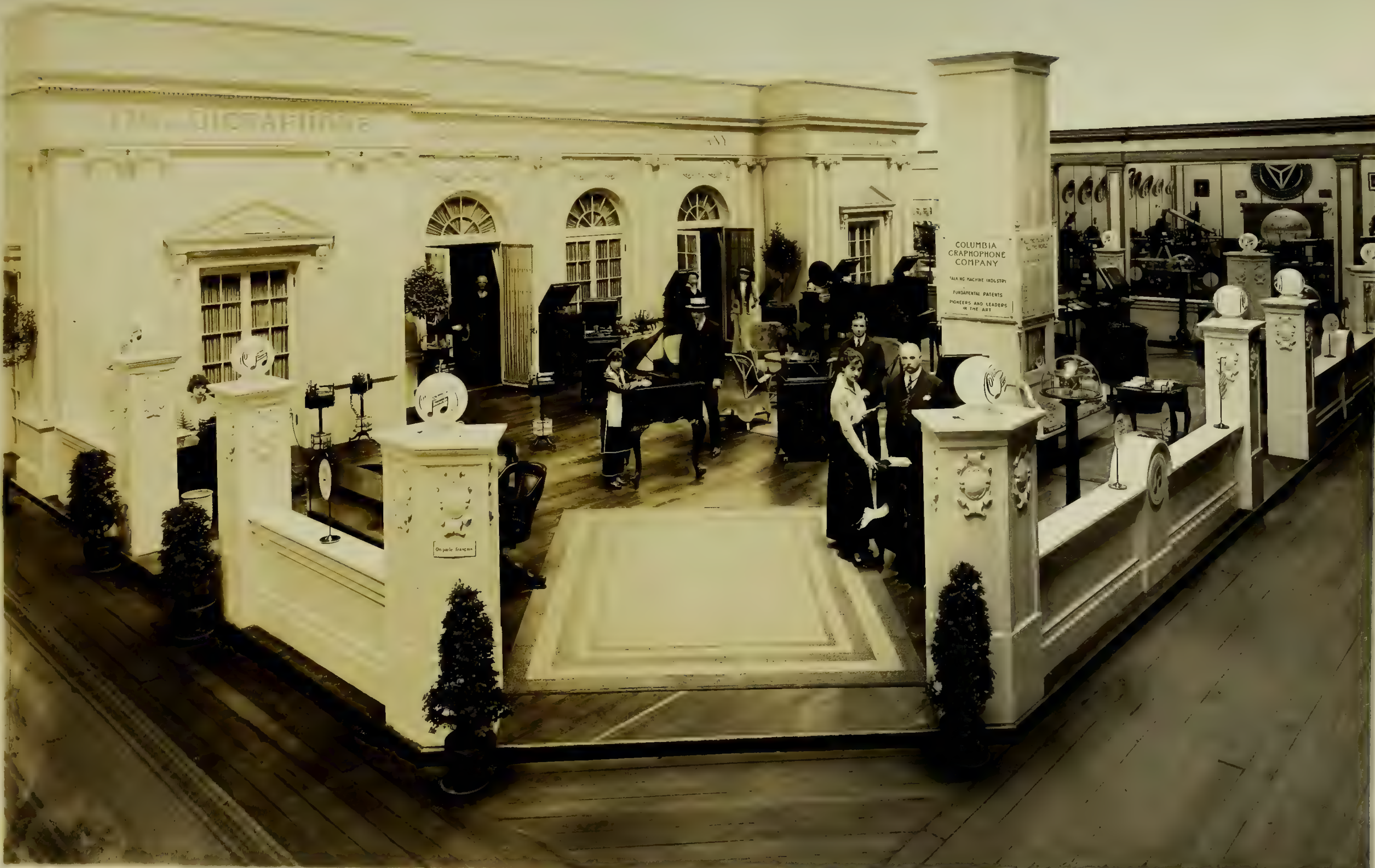
Woolner Distilling Co., of Peoria, Ill. An exhibit of acids, etc.

P #37

RUMENTS.

The Eilers Music Company, representing such famous musical companies as the Autopiano Company, Chickering & Sons, W. W. Kimball Company, Peerless Piano Player Company, Marshall & Wendell Piano Company, American Electrelle and the Autopneumatic Action Company, was of particular interest. The fact that they received the highest award from the Jury proves the worthiness of the exhibit. The electric pianos and the beautiful toned organ, installed in their Auditorium, received a great deal of attention from the musical public. Another feature of their exhibit was the harpsichord, supposed to have been played by Liszt. This in itself was worthy of the exhibit. On display in this same exhibit was the Masteroll Perforating Machine, demonstrating the making and use of the music rolls from their incipiency. This was a feature of the exhibit that attracted thousands of people and proved most attractive, not only to those musically inclined, but to the general public as well.

The Cheney Talking Machine Company had a very artistic exhibit. Their instruments were particularly fine models in mahogany and other choice woods.



Columbia Graphophone Company

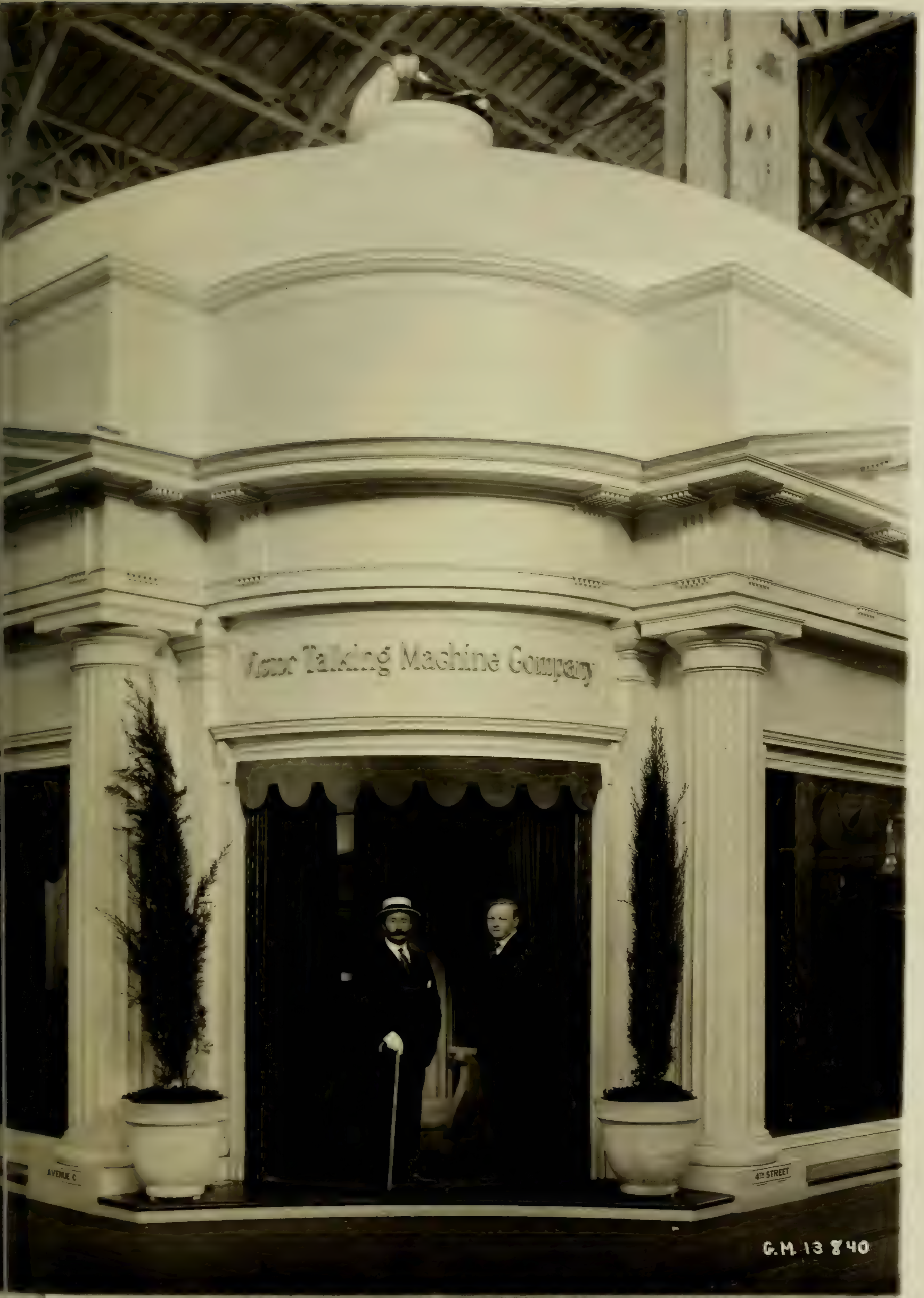
In fact, the Cheney Talking Machine exhibit was among the most attractive of the exhibits in this line. Their exhibition of a talking machine equipped with an attachment for reproducing a regular singing scale, which they claimed was a perfected instrument compared with all other instruments on the market, was of interest.

The Columbia Graphophone Company had on display all makes of their instruments, and as an architectural booth, accompanied by their many styles of talking machines and situated right in front of the main entrance, they made one of the most attracted exhibits of the Liberal Arts Department. A particular feature that proved most attractive and commendable was their system of teaching various languages on their machine. This in itself was an educational feature that was complimented by the Jury. The national reputation as to the tone and musical qualities of their machines needs no further commendation - - it is one of the best.

The Guerrini Company, manufacturers of accordions, was the only exhibit that showed the construction of all parts of the accordion. This was a feature that has never been demonstrated before at any Exposition.

The Vanoscope Company's exhibit of the vanophone, which was later taken over by the Garford Manufacturing Company, Elyria, Ohio, was a very good demonstration of what a small talking machine could do with records produced by various other talking machine houses, and showed where for a small sum, persons of lesser means were in a position to have a machine and at the same time have the advantage of hearing the best and most expensive records made by the world's artists.

The Edison Talking Machine that was exhibited in connection with the Eilers Music Company's exhibit, demonstrated the use of the diamond disc needle, which they claim is imperishable and which adds to the tonal qualities of the instrument. This was further demonstrated in the Auditorium where the Organ accompanied solo records of famous artists,

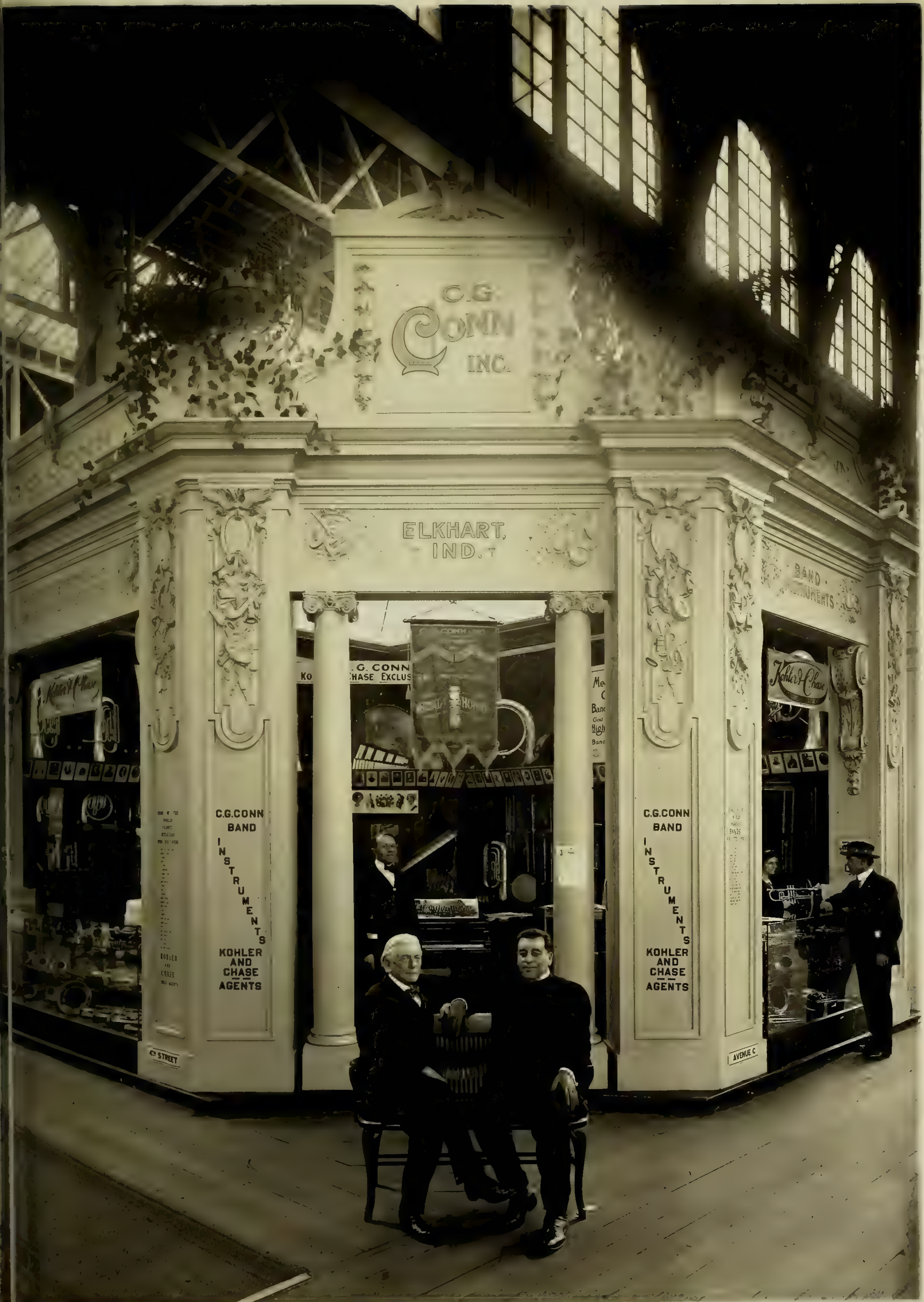


De Gogorza and Manager Worthington of Victor Talking Machine Company

played by the diamond disc. These recitals were programmed daily in this very interesting exhibit, and proved a feature that attracted no little attention and which was commented upon by many famous artists of the country.

The Victor Talking Machine Company, situated in the very center of the Building, housed in a beautiful auditorium with a large round dome overhead, and equipped with opera chairs and also a stage setting that was unequalled perhaps on the ground for its artistic and architectural beauty, proved one of the most fascinating spots in the Liberal Arts Palace, not only as a means of musical recreation and education, but as a place for resting and having the privilege of listening to the greatest artists of the world. There was nothing particularly contemporary as a feature of their talking machines, no new inventions demonstrated, but the perfection of their tones and the construction of their instruments made them one of the most attractive exhibitors of the Exposition.

C. G. Conn, Inc., exhibited a fine line of musical instruments, including solid gold altos, saxo-


C.G. CONN INC.
ELKHART, IND.
BAND INSTRUMENTS
C.G.CONN BAND INSTRUMENTS KOHLER AND CHASE AGENTS
C.G.CONN BAND INSTRUMENTS KOHLER AND CHASE AGENTS
Kohler & Chase
4TH STREET
AVENUE C

C. G. Conn, Inc., Band Instruments

phones, cornets, etc. One gold alto saophone inlaid with jewels was valued at $10,000; two cornets at $2500 each and a trombone at $3500.

Calleazzi & Sons exhibited a full line of accordions and string instruments. A particularly interesting feature of the exhibit was a transposing organ, on which it was possible, through the setting of the hands on a dial, to play a composition in any key, while playing from music written in the key of "C".

The Martin Band Instrument Company exhibited an assortment of brass and reed instruments with handsomely chased gold plated wind instruments.

Jonah Kumalae had a display of Hawaiian musical instruments, such as the Taropatch and Ukulele, withsouvenir jewel boxes, card trays, napkin rings, etc., made of koa wood polished by the natives of the Hawaiian Islands; also necklaces, purses and other small articles made by the natives of seeds and shells.

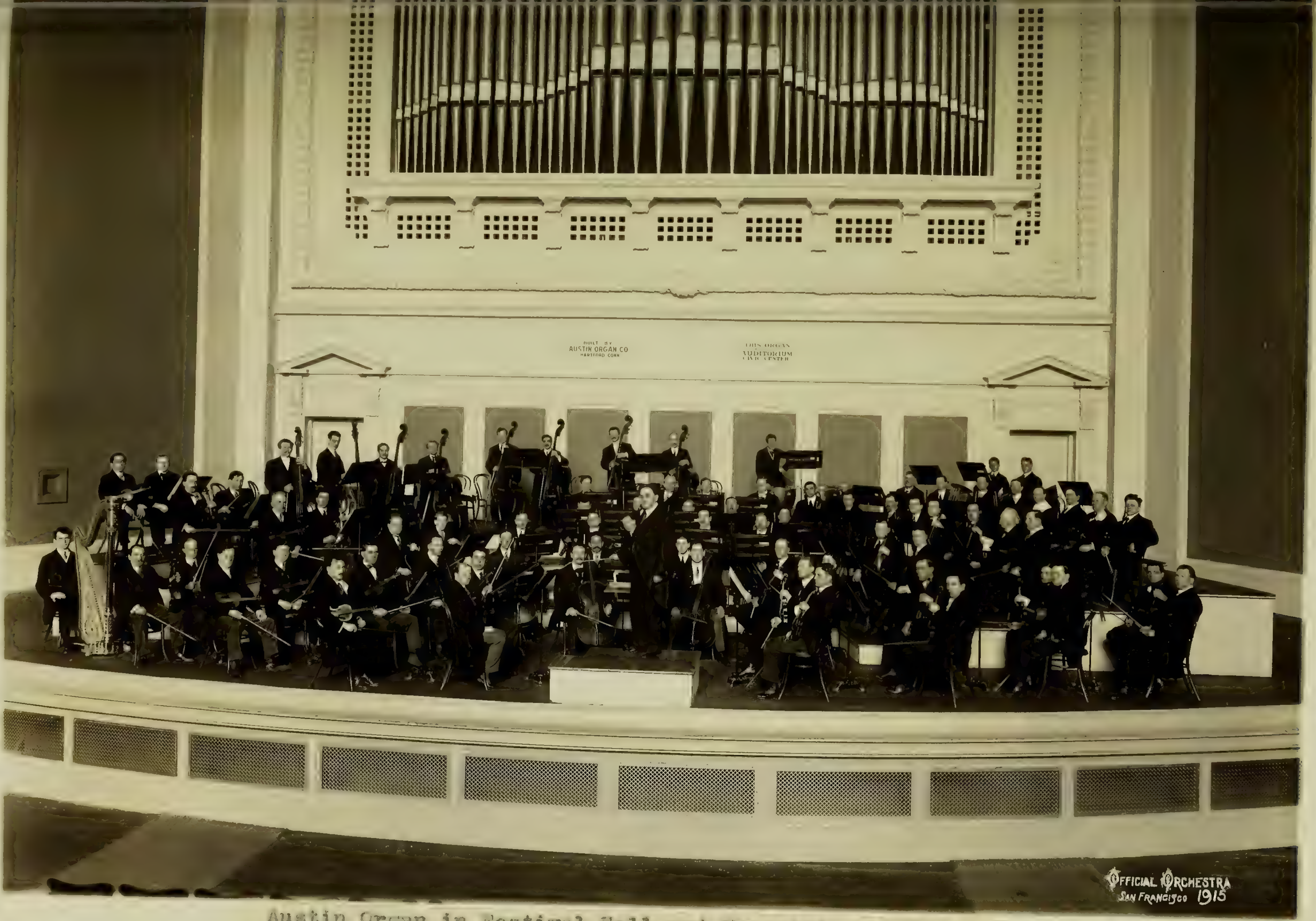
The Sonora Phonograph Company had a very interesting exhibit of their talking machines in all

styles of cabinets. Placed on a table were the five different types of motors used in the Sonora Phonographs, showing construction, operation, etc. These motors run from nine to forty-five minutes. A feature of this exhibit was the multi-playing jewel needle, which is guaranteed to play for three months without removing. The Sonora takes particular pride in its tonal qualities.

The Mills Novelty Company had on display the Violano-Virtuoso, a mechanically played violin with piano accompaniment.

Gabel's Automatic Entertainer, product of the Automatic Machine & Tool Company, was a very interesting and late invention of the talking machine type. It would play automatically as many as a dozen pieces without being touched by the operator, after once being set. This was one of the latest inventions in the talking machine line, and proved a very attractive and entertaining exhibit. The contemporary feature of this product was more emphasized by the reason of its automatic qualities.

E. H. Cary & Son carried a complete line of drums and accessories. As a California concern



Austin Organ in Festival Hall and Exposition Orchestra

competing with many of the large houses of the East, this company's products compared very favorably with any of them.

American Graphophone Co., of New York City. This was an exhibit of the Columbia Graphophone Co., carrying a full line of graphophones, talking machines, etc.

American Piano Co., of New York City. In connection with the General Electric Co's. "Home Electrical" exhibited an electric player piano. This was a fine exhibit of an electric player piano and showed the complete details of same.

American Steel & Wire Co., of Chicago, Ill. An exhibit of music wire in the U.S. Steel Corporation's exhibit, and a very interesting one, showing the manufacture of wire for pianos and other musical instruments. This product requires very delicate and strong steel. It showed what has been done by this big Company.

Austin Organ Co., of Hartford, Conn. Exhibited a large pipe organ as a working exhibit in Festival Hall. This is one of the largest of its kind ever manufactured and demonstrated the wonderful possibilities of an organ in a large Auditorium. This was used in connection with all the concerts, both instrumental and vocal, given at the Exposition and was much appreciated by the Exposition management.

This magnificiant organ has been presented by the Exposition to the City of San Francisco and is being moved to the Exposition Auditorium.

Automatic Machine & Tool Co., of Chicago, Ill. This Company had a very fine exhibit of Gabels automatic entertainers. This is an instrument which is a novel invention in the musical world, demonstrating by the use of electricity a machine that automatically changes the different songs, plays them and automatically stops.

Autopiano Company, of New York City. As the name implies had a fine exhibit in the Eilers' collective exhibit of player-pianos, uprights, grands, electrics, solo styles and music rolls. This instrument was selected as the official musical instrument of many of the State and Foreign Buildings.

Autopneumatic Action Company, of New York City. Was also one of the musical instruments exhibited in the collective Eilers' exhibit. This Company specialized in various parts and actions for pianos and other instruments.

Chickering & Sons, of Boston, Mass. This Company's pianos need no comment, as they are well known in the musical world, and were exhibited in connection with the Eilers' collective working exhibit.

F. Consoli, of Brooklyn, N. Y. Manufacturer of all string instruments and inventor of the finger-board corresponding with each and every one there in regulation to mathematic rule; of their musical composition, the facility of their study is the nature of the instrument. This was exhibited in connection with J. Galleazzi & Co.

Hall Organ Co., of New Haven, Conn. This was another large pipe organ concern having a working exhibit in Varied Industries Palace, demonstrating the extent and possibilities of this wonderful pipe organ.

Herzog Art Furniture Co., of Saginaw, Mich. This Company had a complete and varied line of music cabinets and music furniture, such as music racks, cabinets, etc.

Kauth & Benning, of Hamilton, Ohio. This Company had a line of racks for holding music.

W. W. Kimball Co., of Chicago, Ill. This Company had a fine line of pianos, which need no comment from this Department as to their merit.

Kinetic Engineering Co., of Chicago, Ill. An educational line of organ blowers, showing the possibilities of this product and the extent of manufacture of same by this firm. This was a working exhibit in connection with the U. S. Steel Corporation's exhibit in the Mines Palace.

Marshall and Wendell Piano Co., of East Rochester, N. Y. A complete line of pianos and player-pianos. They also carried the flexitone soloist device for individual expression of unlimited variety and power by extremely simple manipulation.

Masteroll Perforating Co., of San Francisco. A very interesting working exhibit of the manufacture of musical rolls for player-pianos. This was a most unique exhibit and attracted no end of attention from the general public.

Organ Power Company, of Hartford, Conn. Was an exhibit of two 20-horse power three-pressure, seven-stage orgoblos installed on Austin pipe organ in Festival Hall.

Byron Mauzy, manufacturer of pianos, specialized in piano parts, making a very interesting and attractive exhibit.

Charles Parker & Co., of Meriden, Conn. This Company had a very attractive line of musical instruments.

Peerless Piano Player Co., of St. Johnsville, N. Y. This Company had a very fine musical instrument in the shape of an automatic player.

John J. Pole, of Geneva, N. Y. Had an interesting display of musical instruments.

Standard Felt Co., West Alhambra, Calif. This Company had a special line of piano hammers used in connection with pianos and other musical instruments.

Steinway & Sons, of New York City. This was a working exhibit in connection with U. S. Steel Corporation's collective exhibit in Palace of Mines. One of their pianos was used as a working exhibit in the Musical Director's Office.

M. Welte & Sons, of New York City. This Company had a very fine exhibit of Welte cabinet piano-players, in Mines Palace. This was a very interesting instrument and of its kind perhaps one of the best on the market.

Wessell, Nickel and Gross, of New York City. Exhibited piano actions and hammers of the highest grade and standard. That these people are well established and well known is manifested by their receiving the highest award at World's Columbian Exposition at Chicago and at the Buffalo Exposition in 1901.

H. A. Weyman & Son, of Philadelphia, Pa. This was a fine exhibit of the manufacture and invention of mandolins, banjo-mandolins with tone amplifiers and other string musical instruments.

Rudolph Wurlitzer Co., of Cincinnati, Ohio. A fine exhibit of Rudolph Wurlitzer player pianos in connection with the U. S. Steel Corporation's collective exhibit in the Palace of Mines.

#38.
RICAL
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MENT.

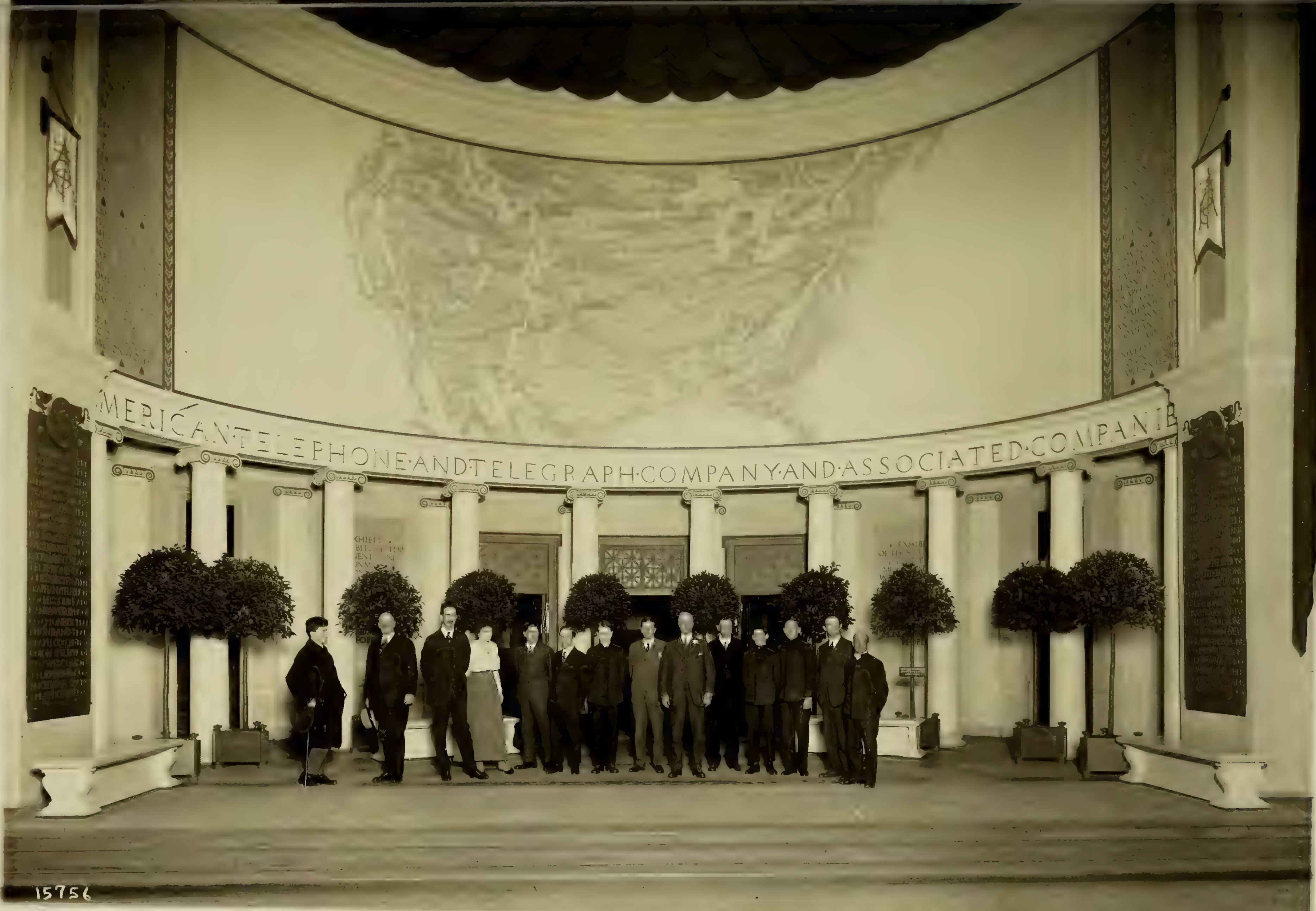
In Group #38, which consisted of theatrical appliances and equipment, there was very little equipment that could be called theatrical, however, the companies that deserve special mention were the A. H. Andrews Co., of Chicago, Ill., who carried a few opera chairs, this exhibit being located in the Palace of Education. Heywood Brothers & Wakefield Company had an extensive line of opera chairs with an exhibit in Festival Hall. The Wisconsin Seating Company, New London, Wis., was perhaps the largest of these concerns. They showed a complete line of opera chairs suitable for all places of amusement where seating is necessary; in fact they were the latest word in products of this kind and exhibited samples of all their latest models.

The General Electric Company carried such products as madza lamps and scinillators, which were used in the Exposition illumination.

Bausch & Lomb Optical Company in this same connection carried a very large and complete line of scintillators, perhaps the largest of its kind in the country, and which are used for all purposes, such as illumination of theatres out doors, amusement parks and search lights on warships and other conveyances as railroads and steamships.

Besides these exhibits under this Group was a display of theatrical tights exhibited by the Gantner & Mattern Company, a San Francisco concern.

The Lopez Artists were the only firm representing decorative scenery.


MERICAN·TELEPHONE·AND·TELEGRAPH·COMPANY·AND·ASSOCIATED·COMPANIE
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Manager Peck and Staff, American Telephone & Telegraph Co.

39. American Telegraphone Co., of

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Springfield, Mass. This Company exhibited an instrument for transmitting the voice directly from either a piece of thin wire or steel plate. The machine is specifically made to be used for answering a telephone during a person's absence from an office. It is an instrument that can be utilized to the extent that should the party leave his office, this machine can be attached to the telephone and in the event of a call coming in, the telegraphone will say "Please leave your message" and will record same either on a wire or steel plate. It can further take the place of a stenographer and a typist can copy the record, similar to a dictaphone. This machine was demonstrated and shown at the St. Louis Exposition but since then there have been marked improvements on it.

Ansonia Electric Company, of Ansonia, Conn. This was an exhibit of bell buzzers, etc.

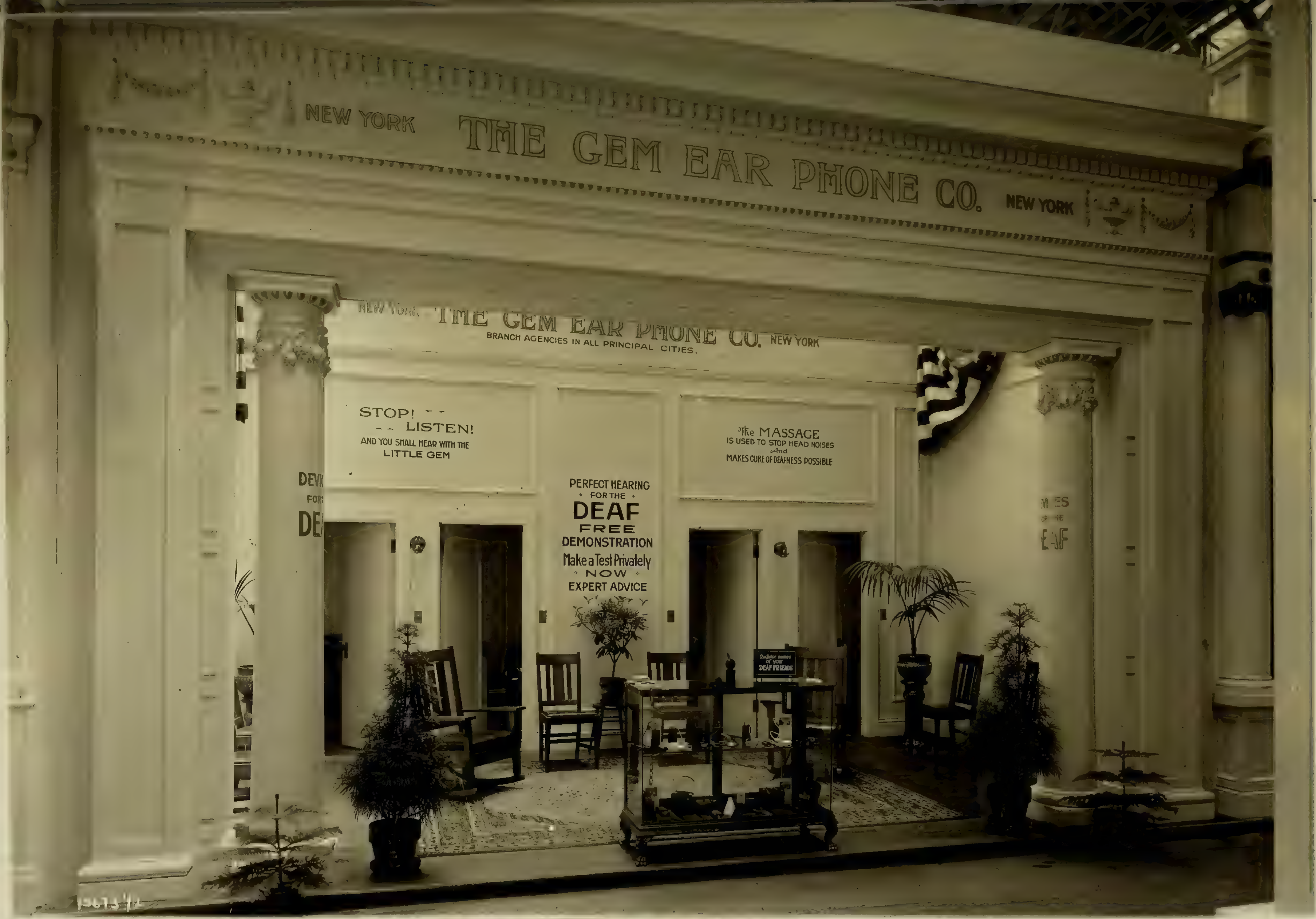
Central Telephone and Electric Co., of St. Louis, Mo. This was an exhibit of electric lanterns and telephones.

Columbia Graphophone Co., of New York City. This was the ideal amanuensis, giving a direct method of dictation. It was used as the official dictation machine at the Panama-Pacific International Exposition and the only dictation machine employed in dictating and transcribing the correspondence of the Exposition. This machine was a vast improvement over the one exhibited at the St. Louis Exposition in 1904, showing many improvements.

Thomas A. Edison, Inc., of Orange, N.J. A telescribe exhibit in Transportation Palace, Automobile Section. This was a simple instrument and used for the same purpose as the telegraph but hardly as complete in detail, although by some experts it was said in many ways to be an improvement on same.

Edwards & Co., Inc., of New York City. This Company had an excellent line of fire alarm equipment.

Gem Ear Phone Co., of New York City. This Company had special devices for the deaf. One is an electric vibrator to massage the parts around the ear as a means of helping the hearing and the other is a direct-connecting ear telephone that had an unusual hearing quality being capable of being regulated for nine different tones.



The Gem Ear Phone Company

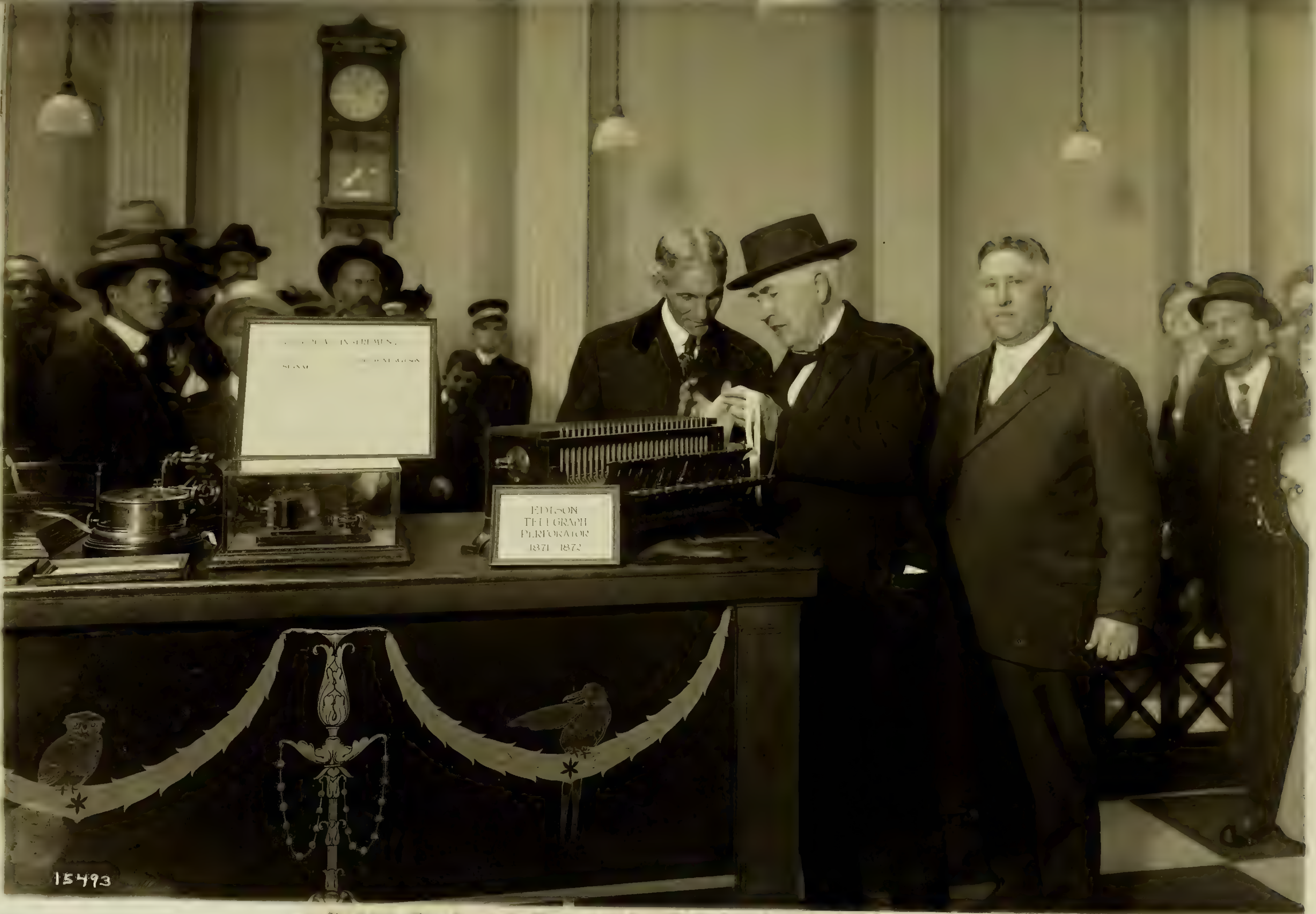
General Acoustic Co., of New York City. This firm had a good working exhibit of the Turner Interconversing system in the Department of Liberal Arts office. This was an instrument demonstrating that anyone in the President or General Managers' office can conveniently converse with as many Departments as desired, and at the same time he can deliver a message to as many as he wishes, cutting off by means of a switch such Departments as are not required; the Departments further being able to cut off their own lines. In other words it was an instrument to facilitate instructions to be given to various Departments in a large establishment. This Company also carried a complete line of devices for the deaf and particularly interesting was their detective dictaphone, a special device used for securing evidence that can be attached to any room and record the conversation that takes place therein. It could also be attached in a room and record the conversation in the room adjoining. Used for the purpose of securing evidence of crimes. The vibrator was so sensitive that a conversation could be heard in the phone from a person standing at least 20 to 30 feet away and could be heard in an adjoining room where connections had been made.

General Electric Co., of Schenectady, N. Y. This Company had a very complete exhibit of electric railway signal apparatus, tungsten contacts, etc. used in electrical methods of communication.

Globe Ear Phone Co., of Boston, Mass. This concern carried a line of devices for the deaf such as church and theater ear-phones and secret phones for detective use; also announcing phone systems.

Gray Telephone Pay Station Co., of Hartford, Conn. This was an exhibit of the manufactured product of telephone pay station devices.

Pierson Transmitter Telegraph Co., of Topeka, Kansas. This was a new and light telegraph transmitter instrument. It is a recently invented instrument through which a regular key board such as on a typewriter can be made to transmit the Morse code without using a telegraph key. In other words, a person not knowing the telegraph code could send messages on this instrument, thus facilitating the work of transmitting telegrams.



Henry Ford and Thomas A. Edison in Western Union Exhibit

One of the special features of this instrument is the prevention of telegraphers paralysis, which was often caused from the extensive use of the key. This is a humanitarian benefit.

Standard Underground Cable Co., of Pittsburgh, Pa. This Company had a rather unusual display of telephone wires of all sizes and descriptions.

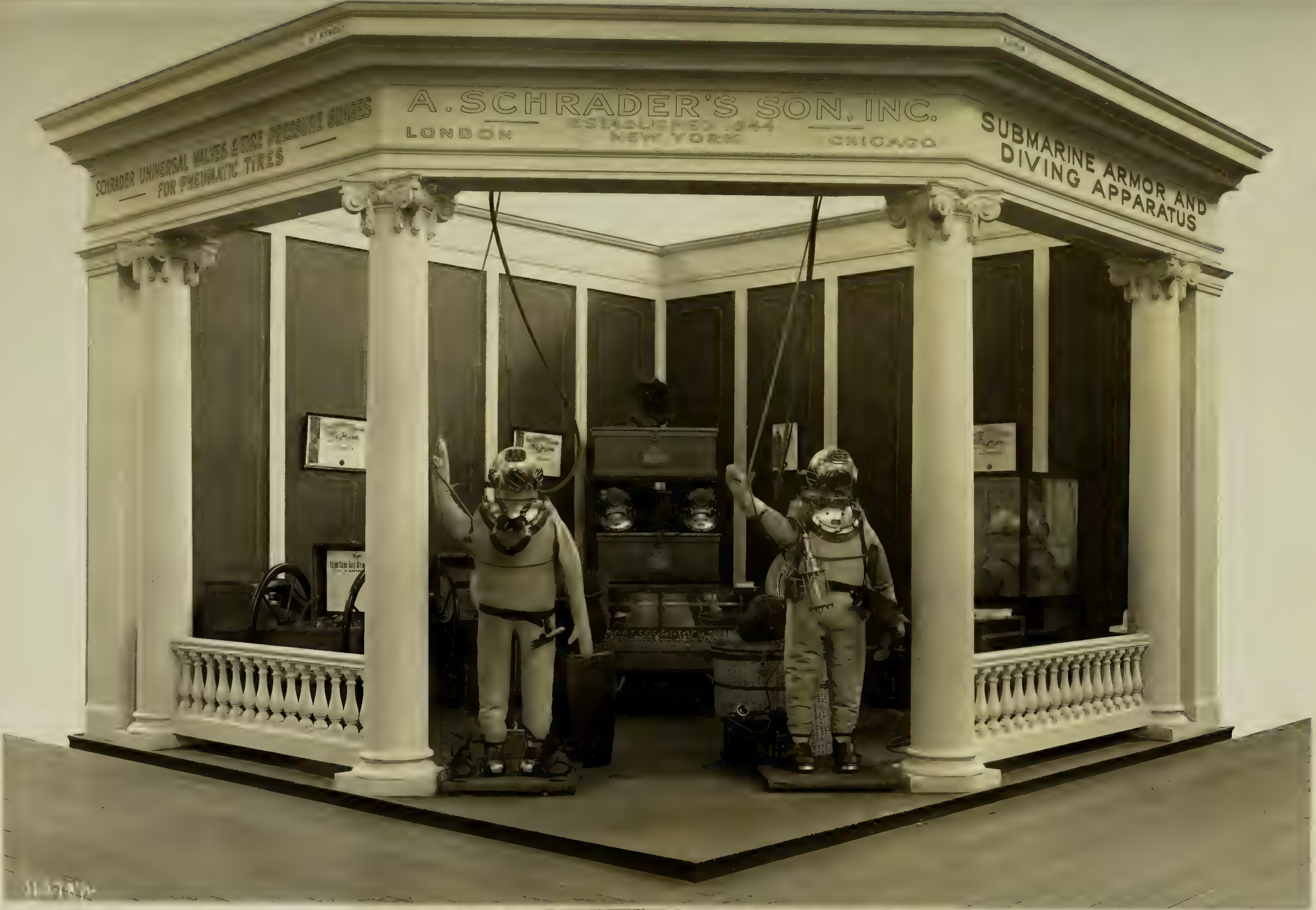
Star Electric Co., of Binghamton, N.Y. This Company had a working exhibit in the Department of Liberal Arts in the form of a fire alarm and police telephone exchange. The Company covered all the fire alarms and police telephones throughout the Exposition Grounds, supposed to be the most modern of its kind. This Company, like the Aero Fire Alarm Co., had its headquarters in the Palace of Liberal Arts.

Western Electric Co., of New York City. This firm had a most complete line of telephone apparatus.

Western Union Telegraph Co., of New York City. Had a very fine exhibit of an office showing all the different activities of a telegraph system from the beginning of the work to the finished telegram. It showed the forms and

styles of machines used in the early days to the modern apparatus. This was a very instructive exhibit and highly educational in character.

American Telephone and Telegraph Company, New York City. Had a very complete and wonderful exhibit of long distance telephoning. It was housed in a large and elaborate booth that proved perhaps, the most entertaining, instructive and attractive exhibit at the Exposition. Every day this Company gave four exhibitions of the methods used in talking from San Francisco to New York, the voice being carried through this long distance apparatus as clear as a bell. By means of perfectly synchronized talking-moving pictures lectures were given illustrating many interesting and widespread features of this great Company's service to the public. Over it conversations were being carried on by various people to their friends in New York or elsewhere in the East, demonstrating to everyone the remarkable achievements of the modern telephone, by which universal service is made available to the inhabitants of the entire country.



A. Schraders Sons, Inc., Diving Apparatus

The Aero Fire Alarm Company had a working exhibit, and was really for the purpose of protecting the Exposition in case of fire, all buildings being equipped with same. This Company's system was selected from among many others because of its great efficiency. It was one of the most interesting exhibits in the Department and attracted a great deal of attention.

The Dwyer Wireless Telephone & Telegraph Company had on exhibition a new high frequency oscillator for producing undampened continuous waves, which are specially adapted for the wireless telephone and telegraph work, the principle of it being that it is able to run continuously without loss in heat units. The voice is absolutely clear and distinct at any distance with minimum amount of power.

The DeForest Radio Company exhibited apparatus for sending and receiving wireless telephone and telegraph messages, embracing the Audion Detector, which increases the receiving range; the Audion Amplifier which increases sound one thousand to fifteen hundred times; time signal apparatus; wireless transmitter. The wireless telephone is now in use on moving trains and boats.

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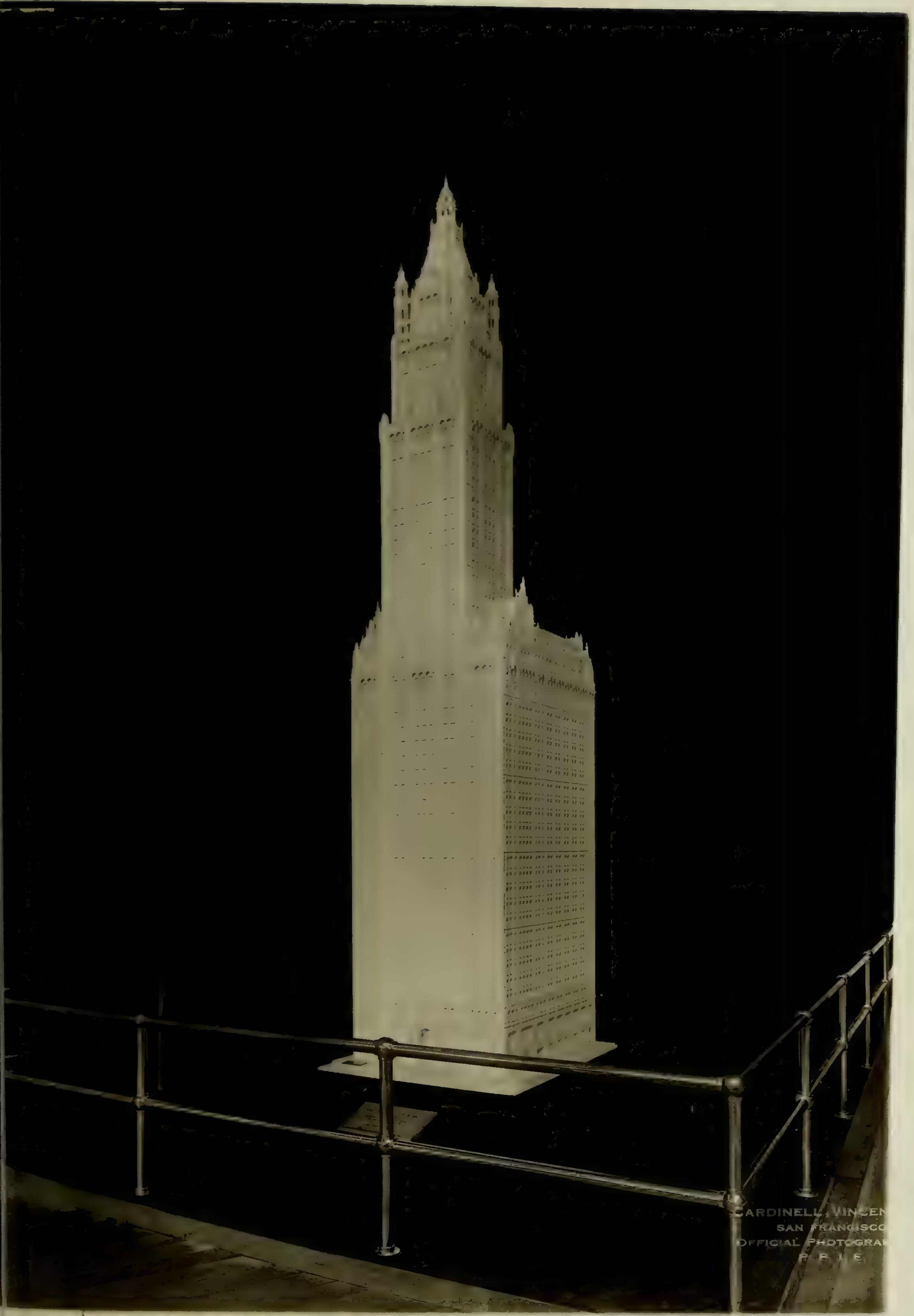
RING.

In Group 40, Civil and Military Engineering, we had such firms exhibiting as the American Bridge Co. carrying lines of bridge structural work used in road construction. We had most all the large representative lines of the country carrying supplies, apparatus and equipment. As designated in the catalogue in the folder, this group covered such products as railroad, canal and levee making machinery, ore and rock crushers, street cleaning, waterproofing, refuse disposal, gas tractors, field and track layers, builders hoisters, rapid loaders, dump wagons, sanitary garbage storage and all other such machinery necessary for civil and mechanical engineering. There were also concrete mixers, elevators, and special designs of steam rollers, traction engines, sheet piling, road graders and all other equipment and methods used for the construction and maintenance of roads, streets, highways, canals, viaducts, etc. That this group carried all the firms of national representation with their equipment is evidenced that it is well represented. However, to mention all the firms exhibiting would cover voluminous pages but the products were of the best made in the world, being utilized all over the world, is evidence that this group was well represented in the Liberal Arts Department.



Broadway Park Place - Woolworth Building Model

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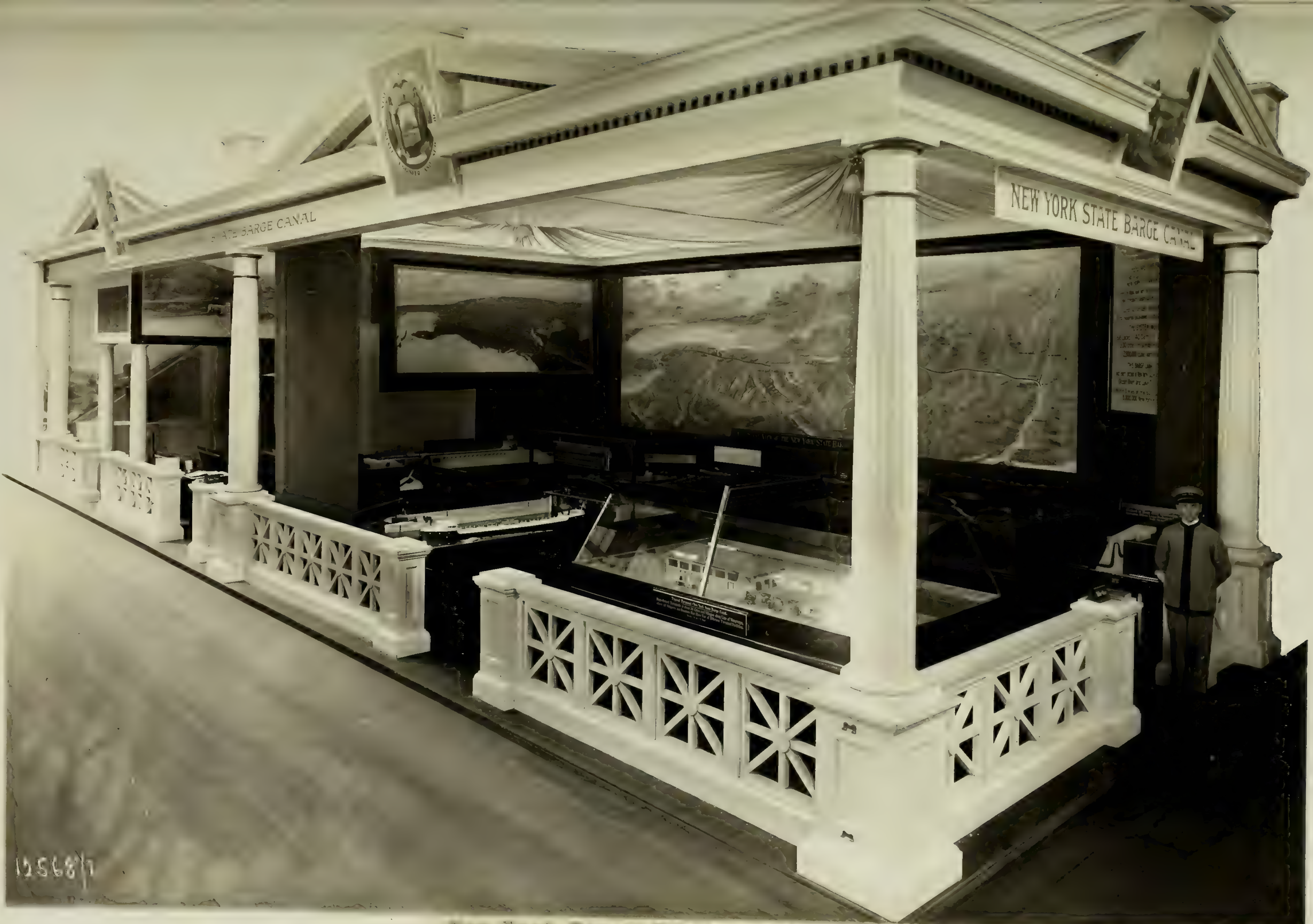
WORKS.

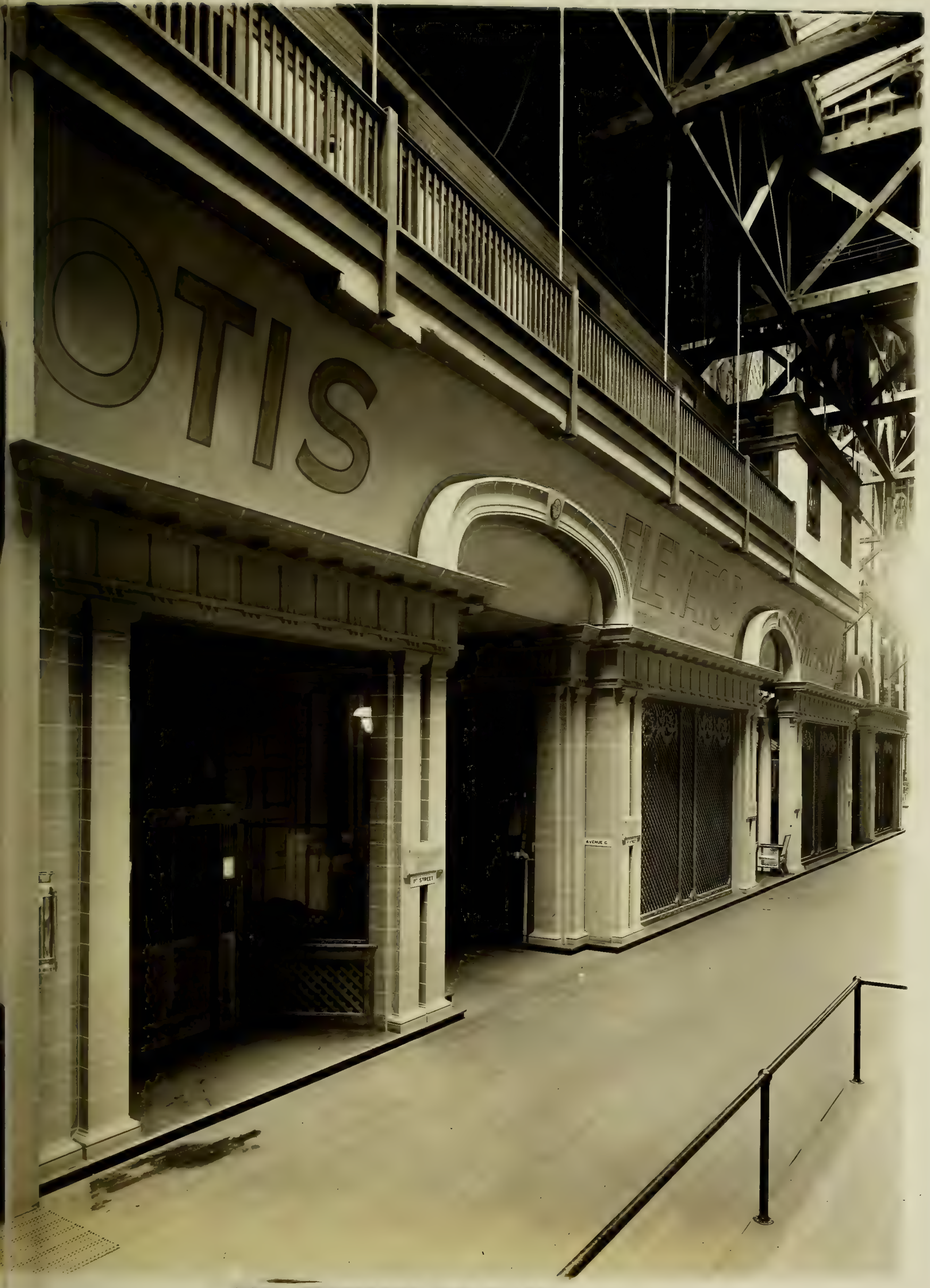
#41. Is designated Models, Plans and Designs for Public Works, and was a field that gave unlimited opportunity to the manufacturers and producers of exhibiting the various products covered in this group. There were such firms as the Armco Iron Culvert Manufacturers Association, the American Bridge Co., the Baker Manufacturing Co., the Barrett Manufacturing Co., the City of Baltimore Harbor Board, the Concrete Form Co., the Department of Public Highways of Louisiana, the Modesto Chamber of Commerce, the New York City Engineering Department, the New York State Engineering and Surveying Department, the Panama Canal exhibition Co., the U. S. Steel Corporation and the Pennsylvania Steel Company. Particularly attractive as the feature in this group was the model of the Panama Canal exhibited on the Zone as a working exhibit. In the completement of the detail to carry out this working model it was manifest that the engineers and electricians' greatest ingenuity was brought into use for the production of this remarkable working exhibit, which clearly illustrated more than anything else the electrical methods of demonstrating the Canal. As the moving platform moved around the Canal Zone, a talking machine explained in each



New York Barge Canal Working Models

person's ear the minute details of the operation of the Canal similtaneous to the platform passing that particular point. This exhibit was said by Vice-President Marshall and Major-General Goethals to be one of the greatest of all the Exposition's exhibits, and, as both remarked, should have been located more centrally in the Exposition rather than on the Zone.

Another interesting exhibit of models applying to this group was located in the City of New York Building, where they had simple working models of the Williamsburg Bridge, the City Docks, the Brooklyn Bridge and other features of modern municipal construction. Besides this they had the New York subways and tubes under the river, which were particularly interesting. In this same connection with the exhibits of the United States Government were models in their different Departments. For instance, in the Department of Liberal Arts there was a model of the late Lincoln Memorial Monument, the White House in Washington and the Treasury Building. These models are being presented, one of them to the University of California and the others to schools of the State. The Government also exhibited with a great deal of pride the facsimile



Otis Elevators and Booth

reproduction of the Panama Canal made by Howell Microcosom Co., of Washington, D. C. Another interesting model was that of the Singer Tower. This was very interesting from both the model and architectural standpoint.

42.
ECTURE.

We had a great many interesting exhibits and wonderful architectural displays. Perhaps what was considered by experts the world over to be the most interesting architectural display were the Exhibit Palaces and similar large structures which were covered by this Group. This in itself was typical of many of the architectural models and exhibits covered by the Department of Liberal Arts. Those deserving of special mention are the highly ornate booths of the American Telephone and Telegraph Company and the Eastman Kodak Company in the Palace of Liberal Arts. The Ford Motor Company of Detroit showed a fine exhibit of a working model of one of its factories which was also very interesting.

43.
ECTURAL
ERING.

This Group received its highest recognition through the Otis Elevator Company which had a

most attractive exhibit of architectural engineering in the Palace of Machinery. The others that received most favorable comment from the general public and from engineers were: Models of New York City in the New York City Building; The Patent Scaffolding Co., of New York, builders of scaffolds and the Randall Elevator Door Control Co., of San Francisco, which exhibited a new device of closing and locking doors and automatically keeping elevators locked while doors were open. Aside from this was the Simplex Window Co. exhibit of patent windows used in Buildings. Also the Hecla Winslow Co., of Chicago, which displayed a very fine exhibit of model windows for office buildings. Of course it is well understood that the architectural engineering of the Exposition Buildings and location of same was the most attractive exhibit on the grounds, not only from an engineering but from an artistic standpoint.

It is to be noted that we have not touched upon the different Governments exhibits. That there may be a better understanding of this subject, we are in the following covering each as a separate Department, beginning with the United States Government.

UNITED STATES GOVERNMENT EXHIBIT.

The United States Government perhaps, as would be natural, had the largest and most representative exhibits of all the various Governments in the Department of Liberal Arts, their space in this Department alone covering an area of 55,000 square feet.

THE

The Bureau of Census used a system of tabulating statistics by means of punched cards. Under this system the various details as to color, six, age, parentage, occupation, etc. for each person enumerated are transfered from the population schedule to a card by means of a mechanical punch, the position of the hole on the card indicating the particular fact to be recorded.

These cards are sorted into classes or groups by an electrical sorting machine and are run through an electrical tabulating machine which counts not only the cards themselves but also the various items of information recorded on them. These machines were demonstrated and shown in operation. Thereby

original Census schedules were shown, some dating back as far as 1790. Three of these volumes contained the population schedules for 1850 of 24 Counties in California. There were also various maps and charts exhibited showing distribution, centers of population, manufacturers, farms, etc., important causes of death and death rates, heads of families, and facts about California, etc.

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In order to illustrate and make clear to the general public its methods of collecting and disseminating information for American merchants, manufacturers and exporters, the Bureau of Foreign and Domestic Commerce had on exhibition a large map of the world on which was shown the locations of American representatives abroad, including the Ambassadors, Consuls and Consular Agents of the Department of State and the Commercial Attaches and Traveling Commercial Agents of the Department of Commerce, who are charged with the task of gathering and forwarding to the Department commercial information regarding the respective countries to which they are assigned and which they think will be of interest to American manufacturers and exporters.

The Commercial Attaches, Travelling Commercial Agents, and the Branch Offices of the Bureau were indicated by small American flags. Photographs of handling material at various ports were shown and a miniature office work file was installed. Two cases of samples collected by

U. S. Government, Bureau of Standards

derived. Working exhibits illustrating the methods and

Travelling Commercial Agents of the Bureau were on exhibition, one of shoe manufactures in and for sale in South America and one of various articles on sale in Bombay, India. It is largely by means of the various samples collected by its Commercial Attaches and Commercial Agents that the Bureau is enabled to acquaint the American Manufacturer and exporter with the peculiar demands of foreign markets.

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Model equipment for State, County and municipal sealers of weights and measures, including weights, dry and liquid capacity measures, portable inspectors outfits, office balances, etc. characteristic types of fraudulent weights and measures including a few of the 20,000 confiscated in San Francisco in 1914, map illustrating the progress of the movement for improved weights and measures legislation and efficient inspection service launched by the Bureau of Standards in 1905, working model of specially designed test weight car for testing railroad track scales in the interest of railroads and shippers.

Models of the international standard of the metric system, and exhibits illustrating the relations of the metric units to those in common use.

Models of fundamental electrical standards defining the international ohm, volt and ampere, from which the numerous other electrical standards are derived. Working exhibits illustrating the methods and

apparatus employed in making electrical measurements and in the testing of electric meters and other electrical measuring instruments.

Apparatus for making magnetic measurements, exhibits illustrating the loss of magnetic properties of magnetic materials at elevated temperatures and the influence of a magnetic field on a moving conductor which is brought to rest by the eddy currents developed, illustrating one type of magnetic brake.

Exhibits illustrating the damage produced by stray trolley currents on water and the gas mains and service pipes, telephone and fire alarm cables, and other metallic subsurface structures, as also on reinforced concrete; photographs of apparatus used in making electrolysis surveys and charts illustrating remedial measures developed by the Bureau for mitigating damage by electrolysis.

Standards of candlepower used in determining the candlepower of incandescent lamps as well as of gas and other flames; photometer for measuring candlepower of a source in terms of a known standard; apparatus for the testing of gas meters and for the analysis and testing of illuminating gas for candlepower, heating value, pressure, etc.

standard thermometers; principal types of apparatus for the measurement of temperatures from the lowest artificially attainable to the extreme limits represented by the temperature of the stars (-272 degrees to 40,000 degrees C), including mercurial thermometers, resistance thermometers, resistance, thermoelectric and radiation pyrometers; exhibit of apparatus employed in the calibration of temperature measuring instruments, leading types of measuring and recording devices now widely used in the industries requiring the measurement or control of high temperatures; exhibit of refractories used in high temperature work; chart designed to illustrate the meaning of high temperatures by the aid of incandescent lamps whose filaments are electrically heated to the temperatures indicated on adjacent centigrade and fahrenheit scales; tabulation of the melting and boiling points of elements and pure substances; tabulation of temperature ranges important in various industries; curves showing relation between filament temperature of incandescent lamps used and efficiency as sources of light.

Bomb calorimeters used to determine the heating value of solids and liquids (fuels, foods, etc.); flow calorimeters used to determine the heading value

of gas fuels; calorimetric resistance thermometers and bridges by means of which temperature differences of one ten-thousandth of a degree can readily be measured; standard combustion samples for checking the accuracy of calorimetric equipment.

Structural material testing: the exhibits included railroad rails which have failed in service causing loss of life and property; rail specimens, and a rail ingot illustrating common causes of failure; massive steel and reinforced concrete columns tested to failure in the huge testing machines of the Bureau, the largest of which has a capacity of 10,000,000 pounds; rope, cable, cylinders, bars, etc. tested for tensile strength.

Cement blocks illustrating the effect of age, character of aggregate, moisture, temperature, etc. on crushing strength; moulds for making test briquettes, sieves for mechanical analysis, etc., samples of cement clinker prepared in connection with an investigation of the influence of composition on cementing value; lumiere transparencies of sections of same.

Bricks showing the progress of oxidation and vitrification in its relation to the burning

temperature and the duration of the heating, the resistance to abrasion and the effect of combined load and temperature.

Vases made of American materials in connection with investigations relating to the development of the ceramic industry in this country.

Among the optical exhibits the following may be mentioned: polariscope used in sugar analysis; interfermeter for the measurement of very small displacements (applied to show the bending of a steel shaft five inches in diameter by pressure applied by the hands); apparatus for testing the planeness of optical surfaces; tubes containing rare elementary gases; thermopile so sensitive that it will measure the radiation from the faintest visible stars.

Metallurgical investigations; carbon and special steels and non ferrous materials; microphotographs and specimens of the metals showing the results obtained from various materials and with the same material subjected to various heat treatments; the effect of composition and pouring temperatures on brasses and bronzes as illustrated by a large number of tensile bars and microphotographs; apparatus for determining heating and cooling curves; curves obtained on iron of 99.98% purity.

Exhibit illustrating the use of micropyrometer used for determining the melting points of materials, especially the rare elements, only .00001 gram being required for a melting point determination.

Exhibits prepared to show the methods of testing textiles, paper, inks, typewriter ribbon, rubber and miscellaneous materials; results of tests shown by samples of material purchased by the Government grossly adulterated or misrepresented.

Miscellaneous instruments; barometers, including aneroids used by aviators; water meters; current meters; tachometers for measuring speed of rotation, etc.

Chemical glassware, including measuring flasks, burettes, pipettes, etc. standard analysed samples for the use of chemists in checking methods of analysis; samples of specially purified materials for checking calorimeters and polariscopes.

Replica of radium standard; spinthariscope; radium ores.

Transparencies, photographs, charts and maps showing views of the Bureau laboratories and equipment, and illustrating the character and scope of the work undertaken.

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This exhibit consisted principally of navigational charts, books and pamphlets, pictures of surveying operations, surveying instruments and models of surveying appliances and an electric tide indicator.

The chart exhibit included all of the sailing and general charts of the east and west coasts of the United States, of Alaska, Porto Rico, Panama, and Hawaiian and Philippine Islands. It also included all of the harbor charts of California, charts of the most important harbors of the other States, and special charts showing magnetic declination and tidal waves. A few of these charts were exhibited from wall-screens and the others could be examined by applying to person in charge.

The books and pamphlets, about fifty in number, consisted of reports on the subject of geodesy, topography, hydrography, terrestrial magnetism, and tides, coast pilots and sailing directions, and tide tables. These were not for distribution here but could be consulted freely.

Photographs of surveying operations were shown from two projecting machines. There were also wall exhibits of photographs of tide predicting machines, of diagrams showing characteristic tides at various ports, and a series of prints and plates

illustrative of a new process of chart printing.

The instrument exhibited included nearly all of the instruments which are used by the Bureau for trigonometric, geodetic, astronomical, magnetic, and topographic surveying. A few hydrographic surveying instruments were included also. There was a model of an observing tower and of a wire drag.

The tide indicator shown here was connected electrically with a sending apparatus and float at the tide house which is located on the Government wharf. This tide house is one of the permanent stations maintained by the Government for securing data upon which predictions are based. It is open to the public and contains, besides the sending apparatus for the indicator, an automatic tide gauge.

A special publication, descriptive of the work of the Coast and Geodetic Survey, and a special chart of Golden Gate with map of the City of San Francisco and the Exposition were distributed at the exhibited.

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The following maps were exhibited:

Panorama of Yosemite National Park
Panorama of Mount Ranier National Park
Relief map of Yosemite National Park
Stereomotograph displaying lantern slides
illustrating parks and reservations.

Wall pictures illustrating parks and
reservations as follows:

Mt. Rainier National Park
Glacier National Park
Natural Bridges National Monument,
Mesa Verde National Park
Crater Lake National Park
Yellowstone National Park
Yosemite National Park.

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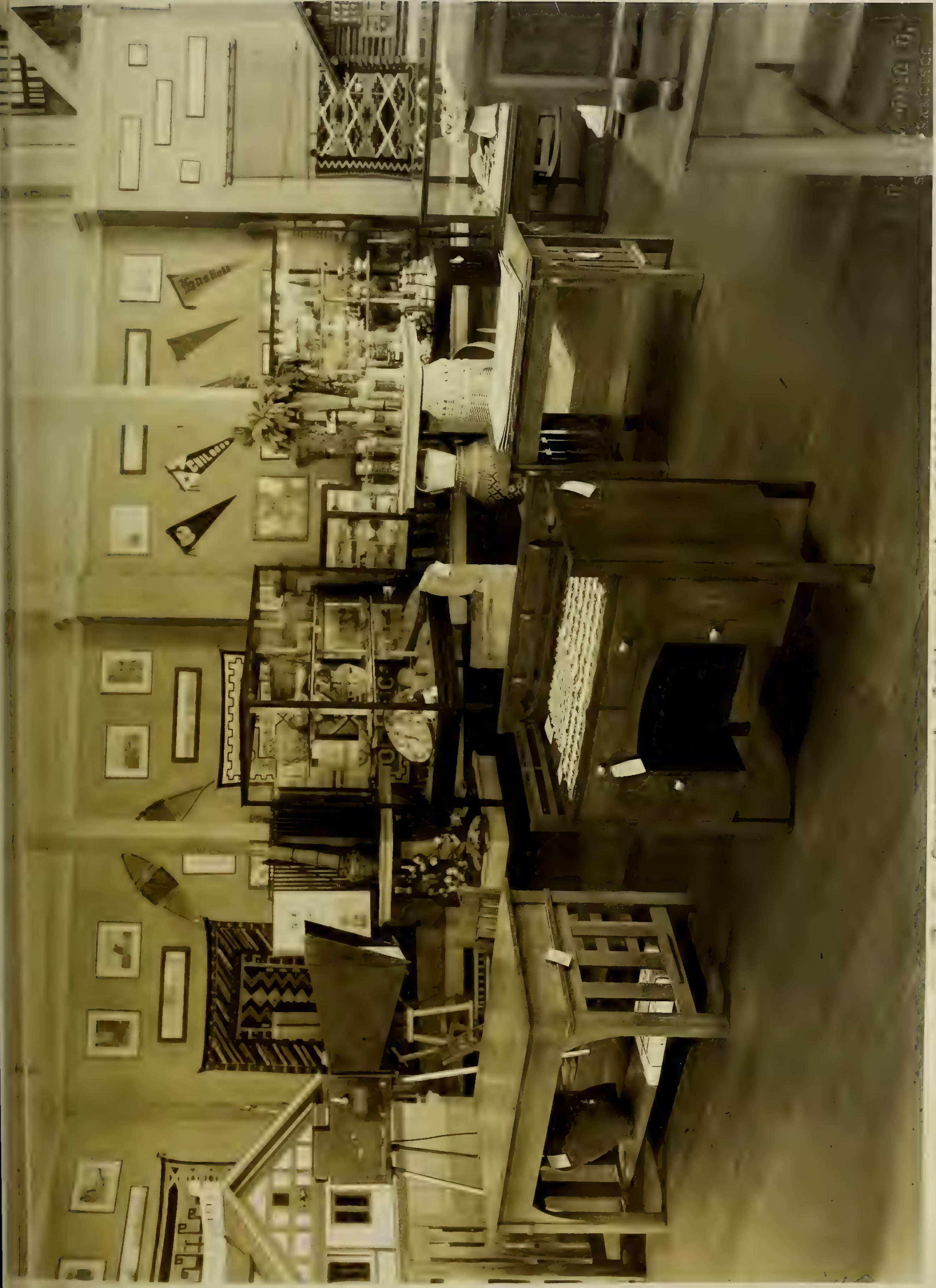
This exhibit consisted of maps, charts, surveying instruments, old and new corner monuments used in the marking of public land, together with many interesting documents from the files of the Office; among the latter were original copies bearing the names of illustrious people who received grants of land for services in the various wars, and others bearing signatures of former Presidents of the United States.

The enlarged map of California was a fac simile of the map compiled from the official records and issued by the Office. Maps of Nevada, Alabama and Utah were copies of late editions of the maps of those States, compiled and drawn in this office, and reproduced chiefly for official use.

Photographic reproductions of operations by field surveyors were interesting, for the reason that they showed actual conditions under which the public survey corners and lines are established.



U. S. Government, Indian Service Exhibit

The map of the United States showing the vast area of the public land granted by acts of Congress to railroads and wagon roads; the map showing base lines and meridians and areas governed thereby; the map showing the areas surveyed by the General Land Office, and the charts showing by States in diagram form and by figures the disposition of public land, presented, in a graphic way, some of the operations in the vast area over which the General Land Office has jurisdiction, in its survey and disposition of the public domain; since its organization in 1812.

N OFFICE
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As in previous Expositions, the intent of the Indian Service exhibit was to show how amenable to civilization the American Indians are, and also how sincerely and extensively the Government is trying to afford the Indians opportunities and facilities for assimilating the customs of the white people by whom they have been surrounded and overwhelmed.

As the first and most hopeful step in that direction is to educate the youth of the Indian tribes, the Government has made large provision for Indian schools. The course of study in school rooms and school shops, was set forth by classroom papers and by articles manufactured by pupils.

Actual work in the class room was given from kindergarten to a Civil Service examination in stenography and typewriting; some of it, mounted on sheets of card board, under glass, and a much larger quantity displayed in loose leaf binders.

In other binders were specimens of printing done and magazines published by different Indian schools. There was also a bound volume of prize compositions on Home Building, submitted in a contest in which every Government school was expected to compete.

The teaching of trades was exemplified from elementary manual training to electrical engineering. The furniture in the exhibit was turned out in Indian school shops as well as the model buildings and the California wagon. Domestic science was represented in many branches, particularly by canning fruits and vegetables and by needlework - - from the first uncertain stitches to embrodiery, lace, an infant's layette, and tailormade suits.

In pictures, one may get a further idea of the equipment of Government boarding and day schools, of the industries in which the girls and boys are engaged, of the opportunities for athletics and recreation, and of the varied activities pertaining to intellectual, social and civic training which the schools provide.

It was more difficult to obtain an agricultural exhibit, but a large variety of grain was shown, in addition to the canned fruits and vegetables already referred to.

Native Indian arts were not overlooked, and specimens of basket-weaving, basketry, pottery, silverware, bead, leather and bark work showed the native ingenuity and deft workmanship of the Indians in their aboriginal state, and the value, artistic and intrinsic, of the handiwork which they bring with them into their changed life and surroundings.

Four blankets were especially worthy of notice. They took prizes in a contest open to all Navajos, the decision of expert judges being based on proportion, design, coloring, and workmanship. The purpose of the contest was to keep up the standard of Navajo blankets which has a tendency to deteriorate into the making of loosely-woven, aniline-dyed rugs for quick sales at low prices.

The progress made by adult Indians and returned students, especially in agriculture and stock-raising was shown mainly by pictures in which the old and the new occupations and methods are contrasted. A set of photographs of the Indian in his primitive life was kindly loaned to the exhibit by Mr. E. S. Curtis, of Seattle, Washington.

Indians are competing successfully with white persons, not only in athletics, but also in raising farm and garden crops, as witnessed by a display of prizes won by Indians at numerous fairs.

The campaign of the Indian Office for the health of the Indian race was set forth by pictures, particularly of the Government sanitoriums in Idaho and Arizona, and there was a bound collection of the health pamphlets which have been issued by the Indian Office and distributed widely throughout the Indian Service.

A moving picture exhibit and more than 200 slides in a stereomotograph illustrated still more forcibly that the whole purpose of the exhibit was to show what the Indian Office is trying to do for the Indian and that it is succeeding to a very gratifying extent.

ON

The exhibit of the Reclamation Service occupied about 1,000 square feet of space in the northwest quarter of the Liberal Arts Palace, and was in charge of C. J. Blanchard, Statistician.

The principal and dominating feature of the exhibit was a typical farm bungalow with pergola. The visitor passed under the pergola to the front of

the bungalow and looked through the large windows upon a beautiful mountain rimmed desert valley which has just been reclaimed by the U. S. Government. The entire layout of a large irrigation project was shown. In the narrow entrance of a precipitous canyon in the mountains, the Government has constructed the highest dam in the world. Back of the imposing structure is the beautiful reservoir, guaranteeing abundant water for the valley below. At the head of the valley a diversion dam turns the river into a huge tunnel through which the waters flow 3½ miles and then pass down the valley in the main canal 70 miles long. Laterals on each side take the water to the farm lands. The effect is that of a birdseye view of about 50 square miles, mountain and valley, and the natural beauty of the scene is enhanced greatly by a clever device for alternating the lighting. In the space of a few minutes it is possible to witness sunrise, noontide, sunset and twilight. The physical characteristics of the Shoshone project are quite faithfully depicted and the panorama attracted much attention.

On four sides of the bungalow were exhibited 41 transparencies electrically illuminated and presented typical scenes of each Government project.

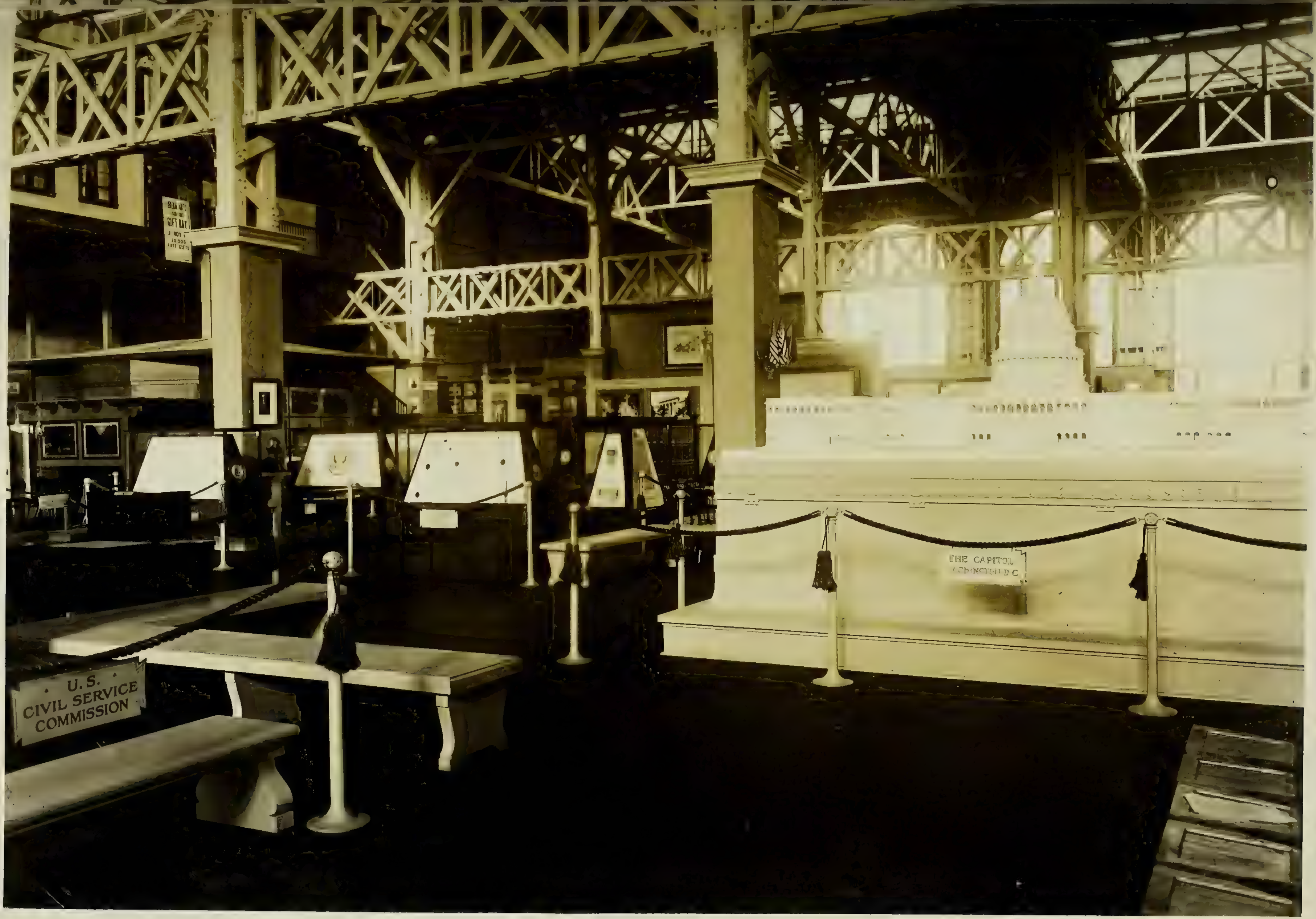
On the southeast corner of the exhibit was a multiplex display standard containing fifty photographic enlargements of project views, and nearby another standard with 300 photographs of typical scenes on 23 projects.

The stereomotograph, electrically operated, furnished a continuous exhibit of colored lantern slides.

On the southwest corner was displayed a working model of a 40-acre irrigated farm, and the method of putting water on the land was demonstrated upon request. Adjoining this on the north was a working model of a canal drop and check illustrating how water can be checked or kept at an even flow on different grades.

A simple diversion box and gate lock for the economic measurement and use of water was also shown.

In connection with the regular exhibit, daily lectures were given in the lecture room near at hand. These lectures covered the activites of the service in the west and were illustrated with motion films and colored stereopticon slides.


U.S. CIVIL SERVICE COMMISSION
THE CAPITOL WASHINGTON D.C.

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XHIBIT.

Bow ornament of the "Olympia", flagship of
Admiral Dewey at Battle of Manila.
Billet head of "Constitution", 1812.
Figurehead of "Constitution", 1834.
Model of the frigate "Constitution"
Model of the frigate "North Carolina", 1816.
Model of the frigate "St. Lawrence", 1826.
A series of paintings of Naval scenes.
6-pound rifles, model 1891.
Models of the buildings and grounds of the
U. S. Naval Academy, Annapolis, Maryland.
Engine built by midshipmen of the Naval Academy.
Oil painting of the battleship "Oregon" in action
at the battle of Santiago, by William
F. Halsall.
Models showing the evolution of the gun from
the old smooth bowl to modern rifle.
Specimens of weaving, splicing, etc. of
apprentices of U. S. Naval Training Station.
Specimens of knotting and splicing by midshipmen
of U. S. Naval Academy.
Drawings, models and machine work done by
midshipmen at the Naval Academy.
Model of the U.S.S. "Maine", sunk in Havana
Harbor, 1898.
Portraits of Secretaries of the Navy and
distinguished Admirals.

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An exhibit of more than ordinary interest to architects and engineers. It consistedof several tastefully arranged booths, upon the walls of which were to be found more than one hundred and fifty mounted photographic enlargements showing Custom House and Post-Office buildings, architectural decorations, working drawings, etc. designed in the office of the Supervising Architect. Several enlarged views of the United States Treasury Department and of the officers and employees of the Architect's office, together with their offices and work rooms, were also in the collection.

DEPARTMENT. The following exhibits were shown from the War Department:

From office of Secretary of War:

42 wood cuts of scenes during the War of 1861-1865.

From U. S. Military Academy:

A pavilion containing reproduction of a cadet room; collection of photographs and tablets; books and schedules of studies; cadet tent.

From Medical Department:

Forbes water sterilizer; Darnall filter and chlorine apparatus; radiographs of feet and footwear; model of kitchen incinerator; painting of typical American soldier; collection of photographs, etc.

From Army Service School:

Collection of vocational photographs.

From Quartermaster's Corps:

Cabinet of articles of the rations issued to soldiers.

From Signal Corps:

Collection of vocational photographs.

From Corps of Engineers:

Collection of vocational photographs.

STATES
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General Remarks: The Public Health Service endeavored to present in a popular and comprehensive way the latest methods of preventing the common communicable diseases. With the limited funds available for preparing the exhibit, many things necessarily were omitted which might properly have been shown. However, such material as was prepared

was made of a permanent character and scientifically accurate as to details of construction and information furnished. The Service maintained an office on the exhibit floor space, where officers and attendants of the service constantly explained the different exhibits. All of the Service publications were displayed for ready reference and bound copies of these publications were available in case visiting physicians and health officers desired to consult same. Such exhibits as required to be inclosed in glass cases were provided with narrow frame bronze cases with plate glass of selected quality to avoid glare and interference with proper vision. The exhibit material was grouped accordingly to the disease which the exhibit material was designated to illustrate, in stages, and methods of prevention. The organization of the U. S. Public Health Service was explained by a chart and a map showed where officers of the Service are stationed throughout the world. There were also models of various Public Health Service stations, including a hospital, quarantine station and detention camp.

Typhoid Fever:

a) The story of a typhoid fever bacillus carrier. This consisted of a series of six

pictures illustrating how typhoid fever is spread by carriers. A young woman, convalescent from typhoid fever, returns to work in a milk store, and infects some of her customers, one of whom dies. These pictures were displayed in a cabinet so arranged that one picture at a time is shown for a space of forty seconds. During the change from one picture to another, a curtain automatically covered the apperture through which the pictures were seen.

b) Contact infection in the spread of typhoid fever. Two cross sections of a boarding house are shown. The same woman serves the boarders and cares for a typhoid fever case. The figure representing the woman moves from the sick room to the dining room, then into the kitchen, and back to the dining room and sick room, being constantly traveling slowly. In the second cross section, three of the boarders are sick with typhoid fever, and one has died, indicated by crepe on the door. A descriptive label showed how this infection might have been avoided.

c) How flies spread typhoid. This model showeda plate of food over which a metallic magnetized fly crawls. As this fly passes over the plate of food, it becomes demagnetized and deposits small metal rods, indicating typhoid bacilli, on the food. The fly disappears behind a napkin, passes

down under the table, and comes up over the edge of the table, picking up other typhoid fever "germs" and carrying them to the plate of food.

d) A house fly. A model of a house fly accurately made thirty-two times natural size was displayed. Fly eggs and larvae magnified seventy-five times was also shown. A large number of small vials were prepared in which are fastened fly eggs, larvae, and pupae, and an adult fly. These were distributed to health officers and physicians as souvenirs and form a vest pocket exhibit of the life cycle of the house fly.

e) How oysters may become infected with typhoid germs. In this model was shown a sewer mouth discharging in a river near the sea coast. At the mouth of the river an oyster bed was located. A belt, actuated by an electric motor, showly revolved under the surface of the water, indicating the current of the river to the oyster bed. Small black lines are painted on this belt to indicate typhoid fever germs which apparently disappear into the oyster shells as they are open for feeding.

f) Water-bourne infections of typhoid. Ten Cities of the United States have a population of

more than one hundred thousand each were selected and the typhoid fever death rate in these cities for the last ten years was shown by a series of elevations in which each sixteenth part of an inch represented one death from typhoid fever. Each of these cities has during the past ten years installed some method of water purification, which was indicated, and the decrease in the number of deaths from typhoid fever was shown by the decrease in height of the elevations after the introduction of water purification methods.

g) Influence of the public water supply on the spread of typhoid fever. A topographical model showing the relationship between certain towns and villages along a watercourse which at one time becomes polluted with typhoid fever germs. The water intake for each town was illustrated, and the number of deaths from typhoid fever during the years in question are shown. A descriptive label explained how typhoid fever infection is carried by streams, and emphasis was made of the fact that it is the time required to pass from the point of infection to the point of spread of the infection, rather than the distance, which governs the possibility of infection. This is done on

account of the very general impression that streams purify themselves within a certain number of miles.

h) Typhoid fever death rate in various States. A large map of the United States was shown, on which the number of deaths from typhoid fever per thousand during the year 1913 was indicated. In the lower right hand corner there was a water tank showing a valve projecting therefrom. A legent invites the visitor to "Turn the valve and find the typhoid death rate in your State". When the valve is turned a pointer moves up and down to be stopped opposite the State for which the death rate is required. While this is being done a little figure of a man climbs a ladder placed against the water tank and points with his hand to the death rate in the State opposite which the pointer is stopped.

i) How a well becomes infected with typhoid fever germs. A well model showing a section through the geological formation underlying a typical country home. Drainage from the surface privy reaches the well by following layers of rock.

j) How a well may become infected even though precautions are taken. This model also showed a section through the geological formation, but in this

case the owner of the house has installed a cesspool which under ordinary conditions would give protection, but in this case the underlying strata is limestone formation in which there always occurs numerous crevices through which pollution from the cesspool could reach the well.

MALARIA.

a) Mosquito Habitat Group. The fact that malaria is transmitted only by certain species of mosquito is very generally known. The habits and life cycle of this mosquito are graphically shown by having an enlarged model of an anophelea mounted in a case prepared to illustrate a typical breeding pool of these mosquitoes. The pool of water was shown surrounded by the usual vegetation found in swamp areas. An adult mosquito is poised at the edge of the water, ready to fly. Floating on the surface of the water were models of eggs of anophelae, and suspended below the surface of the water so that it might be viewed by the spectator was an enlarged model of the "wigler" stage of this mosquito. For purposes of comparison, enlarged models of the eggs and larvae of the culex mosquito were also placed in this group, so that the difference existing between the eggs and larvae of the two species could be graphically drawn. Descriptive labels on this

habitat group explained the various features shown.

b) How to avoid mosquito breeding. A series of six glass jars designed to illustrate various methods by which mosquito breeding can be avoided. In one jar the water has been covered by films of kerosene oil. In another the water has been treated with larvacide. In one fish were placed which destroy mosquito eggs and larvae. In another jar the water has been replaced by sand, showing filling. In another sea water has been added. From another the water has been removed by drainage.

c) Mosquito breeding tank. A large glass tank over which has been constructed a framework of glass and bronze wire will form a permanent breeding place for mosquitoes. It was designed to keep a constand supply of mosquitoes breeding in this tank, so as to show the actual living specimens of the various stages in the development of mosquitoes.

d) Glass models showing the life cycle of the malarial parasites. Twenty-six models were made by an expert, and displayed in a connective series showing the development of the minute animal parasite which causes malaria, from the time it is

introduced into the human system by the bite of an infected mosquito until it is again taken from human blood by another mosquito. The stages of development through the parasite passes in the body of the mosquito were also shown and its method of reintroduction into another person.

e) Charts and maps showing the prevalence and distrobution of malaria throughout the United States and the economic loss caused annually by this disease.

PLAGUE.

a) An enlarged model of the rat flea, which is the principal agent in spreading bubonic plague from rats to man.

b) A model showing a house of ordinary cheap construction which easily becomes rat infected. An uncovered garbage barrel shown offered an abundant supply of food for such rats as live in the vicinity, and the spaces between the partitions and openings left around improperly installed sewer and water pipes, showed how rats freely pass from one part of the building to another.

c) A rat proof house. A model house has been constructed under the supervision of an

officer of the service in which the proper methods of construction were shown. It is possible to entirely eliminate rats from human habitation if the proper methods of construction are followed, the details of which were shown by this model rat-proof house.

d) The U.S.S. "Ratless". This name was given to a section model of a ship constructed in such manner that it becomes practically rat proof. Automatic rat runs are installed so that such rats as might come on board with cargo and stores would be likely to leave the ship through the runways provided. A fumigating machine is installed on deck, and pipes lead to all the holds so that the ship can be easily freed from rats and other vermin. The staterooms, crews, quarters, store room, etc. are rat and vermin proof in construction.

e) The natural enemies of the ground squirrel. The fact that ground squirrels are subject to infection by bubonic plague is a serious problem in the western States. A constant warfare is being waged against ground squirrels by the local, State and National health authorities in California. The natural enemies of the ground squirrel were shown in

this model of a rocky cave, showing owls, snakes, coyotes, eagles, etc., all of which destroy ground squirrels.

f) Squirrel destruction. A full size working model of the carbon bisulphide pump used to destroy ground squirrels in their holes. A quarter section model was also shown so that the internal parts of the apparatus may be seen and understood.

g) A map showing the world distribution of plague. In order to avoid the spread of plague, it is necessary to know where cases of bubonia plague exist. All the known facts were shown on this map which was kept constantly up to date during the progress of the Exposition.

PARASITES OF MAN, INCLUDING GERMS OF CERTAIN DISEASES.

Transparencies and dimensional models were prepared of thirty-four different common parasites of man, including the germs of common diseases. Glass models of the eggs of seven common intestinal parasites were shown. It is believed that these models were of great assistance to physicians in fixing the appearance of these eggs in mind so that in making microscopical examinations of excreta to determine the presence of

parasites the different parasitic eggs may be easily recognized. Descriptive labels were prepared for each parasite, giving its life history, statistical data regarding the disease caused by the parasite, and other pertinent information.

YELLOW FEVER. Yellow fever is another disease which is spread entirely by the bite of infected mosquitoes. The mosquito which transmit yellow fever is strictly a domestic insect and breeds only near human habitations. An enlarged model of this mosquito, the aedes colopus has been made and was displayed in an ordinary wooden cistern or water tank over which a glass case was placed. A map showed the world distribution of yellow fever and the possible influence of the change in travel routes in spreading yellow fever to other parts of the world, through the opening of the Panama Canal.

SMALLPOX. A series of wax models showed the lesions of smallpox. This is contrasted with the lesions of vaccination. Seven wax models of a human arm showed the different stages of a typical vaccination from the time the arm is sacrificed until the vaccination sore heals and leaves a typical pitted scar.

TUBERCULOSIS. A model of the Public Health Service Sanitorium at Fort Stanton, New Mexico, was

displayed. An enlarged model of the tent house used at this sanitorium was prepared. Statistical data in the form of charts showing the economic loss from tuberculosis in the United States was also exhibited. There are more deaths from tuberculosis than from any other single cause. Tuberculosis kills chiefly in the most active and productive period of life.

RABIES. Two dogs were shown, one being muzzled with the ordinary leather muzzle in common use, and the other with a metallic muzzle designed by an officer of the Service. This muzzle is comfortable for the dog, but absolutely prevents his biting other animals or persons. Charts displayed with these two muzzled gods gave data relative to the prevalence of rabies in the United States and its treatment according to the Pasteur system.

ROCKY MOUNTAIN SPOTTED FEVER. This is a quite fatal disease in certain of the Western States. The disease is spread by the bite of an infected tick. Models of the male and female of this tick were shown. A map showed the distribution of this disease and printed posters showed how the disease may be controlled or eradicated.

TYPHUS FEVER. A map showed the distribution of typhus fever during the world during 1913.

This disease, it is now known through the work of Anderson and Goldberger of the Public Health Service, is transmitted only by body lice. A large model of a body louse was shown, and its method of transmission pictorially explained.

TRACHOMA. The communicable eye disease, trachoma, or granulated eye lids is prevalent in many sections of the United States, particularly in the Appalachian Mountain chain. During the period from October 1912 to April 1914, 165,907 persons, mostly school children, were examined by officers of the Public Health Service, and 2,393 cases of trachoma were found. 8,940 cases of trachoma were found among 39,831 American Indians examined during this period. In order that the disease may be recognized enlarged models were made of the human eye and surrounding region. One of these models showed the natural condition of the conjunctiva of the upper lid when everted. Another model showed the appearance of the upper lid during an active trachoma infection. A third model showed how the eye lid appears after the active stage of the disease has passed and scar tissue has been found.

DIPHTHERIA. Blown glass models of the germs of diphtheria were shown and information relative to the deaths caused by this disease was given on printed posters. Charts showed the effect of treatment of diphtheria by anti-toxin, and the great reduction in the number of deaths caused by this disease since the introduction of this system of treating diphtheria.

MISCELLANEOUS.

a) Economic loss during one year in the United States through preventable diseases. This was an allegorical group. The figure of Uncle Sam represented the United States, and the figure of a dragon represented diseases that could be avoided if proper safeguards were taken. A constant stream of gold was shown passing from the pocket of Uncle Sam into the dragon's mouth. This annual loss amounts to billions of dollars during a year, and is just as real as if the money actually streamed out of the United States Treasury. This loss can not be prevented by either National, State or municipal authorities unless every citizen cooperates fully in the effort made to diminish preventable diseases.

b) The Village of a Thousand Souls. A model showing a typical country village of about 275

houses. Certain of these houses in various parts of the village have different colored transparent roofs. Electric lights were installed in these houses having transparent roofs arranged in three series: one series of lights showing the number of deaths from tuberculosis, these houses having white roofs; another series showing the number of deaths from pneumonia, these houses having red roofs, and the third series showing the number of deaths from cancer, these houses having green roofs. The lights show up consecutively and at the time the various colored lights appear an automatic sign gives the death rate from the disease in question.

c) Sanitary and insanitary farmhouse. This model showed a typical farm house constructed without any special attention to sanitary environment. Mosquito and fly breeding places are present. A surface privy allows the soil to become infected with the germs of typhoid fever and the eggs of hookworm. All of these conditions are corrected on the other half of the model where a proper sanitary farmhouse, barn, and surroundings, are shown.

d) Sanitary and insanitary rural schools and surroundings. The model showing an insanitary

rural school portrayed the usual conditions found at ordinary country schools. The part of the model showing a sanitary rural school had the latest type school building constructed. Attention was paid to the source of water supply, the method of disposal of excreta, prevention of fly and mosquito breeding, and provision was made for the intelligent direction of the energies of the children by providing play grounds and school gardens.

MENTAL HYGIENE. A series of charts were furnished by the officer of the Public Health Service serving with the Society for the study and prevention of Mental Diseases. These charts showed the prevalence of insanity in the United States, the cost of the care of the insane, the proper treatment and environment that should be given to dependents of this class, and other striking facts in connection with the increase of insanity.

WATER.

a) Recent studies have shown that the degree of infection of water can be quite closely determined by microscopic examination of water to determine the nature of the minute animal and vegetable

organisms found therein. Twenty-four blown glass models illustrating these various minute forms of animal and vegetable life were made by an expert glass blower. These models were displayed in a glass case, arranged in three series. One series of organisms are found only in highly polluted water. Another series are found only in water showing a moderate degree of pollution, and the third series of models are of organisms found only in pure water. These organisms were displayed in their natural colors, and this exhibit was very beautiful from an artistic standpoint. At the same time it gave accurate scientific data relative to these minute organisms, which are becoming of great interest to sanitarians.

b) Emergency hypochlorite plant for water disinfection. This was also an actual working plant, constructed of material available in any community upon short notice. It consisted of a series of barrels in which the hypocholorite of lime is mixed with the water and introduced into the water system by an automatic regulator which can be set to give the desired amount of disinfectant required according to the local conditions.

c) A traveling water analysis laboratory. This was a compact, complete, portable laboratory designed by the Minnesota State Board of Health officials and used by them in connection with the examination of sources from which water is obtained by common carriers for passengers in interstate traffic.

d) Maps and charts showing how cholera, dysentery, and other diseases are spread by polluted water.

SEWAGE TREATMENT AND DISPOSAL OF EXCRETA.

a) Sewage treatment plant. This model was comprised of (1) a diversion manhole, (2) an Imhoff tank, (3) a dosing chamber and (4) a sand filter. The sewage from the house or houses first passes into the diversion manhole where it can be either sent through the Imhoff tank or diverted when repairs are necessary. When the sewage passes through the Imhoff tank it takes out the solids which float and holds such solids until they decompose into unobjectionable sludge. The sewage then passes into the dosing chamber so that its flow to the same filter may be regulated. The digested sewage passes through the sand filter free from all objectionable odors and disease producing bacteria. When the sewage leaves the filter tank it is quite clear and of an attractive appearance.

b) A sectional model of a special type privy, known as the L.R.S. privy, for use in connection with suburban and country houses.

c) Another sectional model showing how an L.R.S. privy might be permanently installed by constructing the receiving and discharging tanks of concrete.

d) Model of a sanitary privy of a design approved by the U. S. Public Health Service for installation in rural communities.

e) Model of a special design of sanitary pail. This pail is recommended for use in small villages where night soil is collected and disposed of.

WORKING MODEL BOARD OF HEALTH LABORATORY. One of the most interesting features of the Public Health Service exhibit was an actual working laboratory, fully equipped, with all working apparatus, such as incubators, sterilizers, electric centrifuges, microtomes, microscopes, etc. A competant bacteriologist carried on actual laboratory procedures, such as examinations of water, performing Wasserman reactions, making cultures for diphtheria or typhus fever, and such other work as is usually done by a Board of Health Laboratory.

Demonstrating microscopes were used in order to show visiting physicians and health officers various parasites and other specimens in which they were interested.

MOVING PICTURES. The manager of the moving picture division of the Government Exhibit Board had films made showing the work of the Public Health Service at Ellis Island in inspecting immigrants. The work of the Hygienic laboratory, Washington, D. C. was also exhibited as a two reel feature. Another film of moving pictures showed the work of the U. S. Public Health Service in the eradication and treatment of trachoma in certain sections of the mountainous part of the United States. Other films showed the work of the Service in ground squirrel eradication in California, the inspection of vessels at National quarantine stations, and such other features of the work as can be presented in an interesting manner by the use of motion picture films.

In addition to all of the above, a model health officer's library was part of the office equipment of the Public Health Service exhibit.

After the exhibit was installed, photographs were made of all the various models, charts,

maps and other features of the exhibit, and a service bulletin was issued describing in detail everything shown, giving all the reading matter which was displayed on the descriptive labels.

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TUTION.

The display of the Smithsonian Institution and its various Bureaus occupied a large space on the north side of the Palace of Liberal Arts.

The enclosure on the north side of the space contained illustrations of the work of the Smithsonian Institution. There were photographs of the Smithsonian Institution building and offices, of the Seal of the Institution, and protraits of James Smithson, the founder and Joseph Henry, Spencer Fullerton Baird, Samuel Pierpont Langley, and Charles Doolittle Walcott, Secretaries of the Smithsonian, and of Thomas George Hodgkins, donor of the Hodgkins Fund. Above the booth hung a model of the Langley experimental flying machine, the original of which in 1896 made the first successful flight. On the walls were photographs of this machine in flight, and a map showing its course over the Potomac.

Bureau of Ethnology. Three sections of the wall contained photographs of American Indians and aboriginal life made by the Bureau of American Ethnology, whose work is the study of the native inhabitants of America. A case contained the well known publications of this Bureau.

National Zoological Park. A section of the wall contained photographs of the National Zoological

Park at Washington and maps showing its location and extent.

International Exchange Service. The International Exchange Service by means of which the Smithsonian sends broadcast over the world its scientific publications in exchange for the publications of other countries was illustrated by photographs, a table showing the increase in the service, and a map showed the distribution throughout the world of the publications.

Smithsonian Library. Views of the Smithsonian Library were shown. This library now deposited in the Library of Congress consists of more than half a million titles of scientific works and publications.

International Catalogue of Scientific Literature. The International Catalogue of Scientific Literature which is a classified index of the current scientific literature of the world is exhibited here in a table case. This great undertaking is carried on by 33 countries, that for the United States being directed by the Smithsonian. About 180 volumes have been issued.

Astrophysical Observatory. The Astrophysical Observatory was founded by Professor Langley in 1890 for the purpose of investigating the phenomena of the suns rays and their effect on climatic and meterological conditions. There were shown photographs of the buildings, the sun, tabulations of data, instruments used in observing and publications.

The Hodgkins Fund. Thomas George Hodgkins presented the Institution with $100,000, the interest of which was to be devoted to the study of the properties of the air in connection with the welfare of man. Medals and prizes have been awarded to investigators in this field. The published works and medals under this fund were exhibited in connection with the Aerodynamical Laboratory.

Aerodynamical Laboratory. The Aerodynamical Laboratory was founded for the purpose of determining the physics of the atmosphere and to act in an advisory capacity on questions in aeronautics. A number of publications of the Laboratory were exhibited.

United States National Museum. The exhibition of the United States National Museum was intended to show advanced methods of scientific presentation of museum specimens for the purpose of instruction.

The nucleus of the exhibit was the family group case portraying in a most attractive manner representative members of a tribal household engaged in characteristic vocations. This case occupied a central position and was flanked by a related model showing a dwelling group and village occupations, environments and other data. Surrounding the pictorial nucleus were cases in which objects connected with social life were arranged in order. This ethnic exhibit unit was developed by the National Museum and possessed the features of attractiveness as well as instructiveness. Four of these culture units were exhibited, embracing tribes of men of low advancement whose arts and industries illustrate one of the stages through which man has passed towards enlightenment. They also showed the efforts of man to harmonize himself with his material surroundings in nature, whether his location be in the artic or the tropics. These groups are the Caribs of British Guiana, the Dyaks of Borneo, the Zulus of South Africa and the Eskimo of Alaska.

The steps by which familiar tools have developed into the great economic machinery of the present day were illustrated by four cases taken from a larger series in the National Museum. These

illustrated the development of fire-making methods from the process of rubbing together two sticks to the electric light; the evolution of the knife and saw; the spindle and shuttle, so important in the textile industry; and the European and American ax. These series were most instructive and stimulating to the mind and are readily appreciated by those who saw them.

On the walls were exhibited illustrations of Indian life by George Catlin, enlarged photographs of scenes among the Eskimo and Indians of Alaska, the Hawaiians, Samoans and people of Guam.

Other exhibits. Slides of biological, geological and ethnoligocal subjects were exhibited by means of a stereomotograph.

The Elk Group. An attractive group of three elk from Yellowstone National Park was displayed in the Agricultural Palace.

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The Bureau of Navigation exhibited jointly with the Bureau of Standards a complete set of radio measuring instruments as used by Radio Inspectors in inspecting ship and shore radio installations, to

determine whether or not they are in compliance with the Act of Congress regulating Radio communication.

A small quenched spark panel set, designed by the Bureau of Standards, which was in service on the Bureau of Navigation's motor boat, "Tarragon", was shown in operation. This apparatus was used to demonstrate the use of the measuring instruments used by the inspectors.

Two antennas led to the booth: one from the Tower of Jewels and the other inside the Building. Using the former antenna, signals were received from Arlington, Va., Tuckerton, N. J. and other distant stations. The noon time signals from Mare Island Navy Yard operated an instrument in this Bureau's booth which could be heard within thirty or forty feet of the apparatus and which enabled visitors to adjust their time pieces. The small inside antenna was intended to show the relative correct dimensions for amateur wireless stations used, in order to adjust the apparatus connected to it to resona at a 200 meter wave length efficiently.

One whole table was taken up exclusively by amateur apparatus, the object of which was to show

this class of visitors to the exhibit the relatively correct dimensions of the different pieces of apparatus to operate or construct to get the most efficient results on the wave lengths prescribed for this class of stations by the radio laws.

An arc transmitter demonstrated a number of very interesting experiments, such as the audible discharge of a condenser, wireless telephony, etc. There were also shown some low frequency resonance circuits, which proved interesting to a large number of the members of the electrical profession visiting the Exposition.

The numerous photographs and samples of printing and binding which were shown in the exhibit of the Government Printing Office in the Liberal Arts Palace can, at the most, convey only a meager impression of the magnitude of this plant - the largest printing office in the world.

The approximate cost of the new seven-story building in Washington, D. C., completed in 1904 by the authority of Congress, is $2,410,000. The total approximate value of all equipment used in this office is $2,400,000.

The combined floor-area of all its buildings is 13½ acres, accomodating thirty-five sections and divisions which embrace about 4,000 employees.

The exhibit of the United States Civil Service Commission, situated in the Palace of Liberal Arts, near the model of the United States Capitol, was intended to demonstrate as graphically and concisely as possible four important points:

a) The extensive and systematic organization of the Commission for transacting its business;

b) The development of civil-service reform, or the so-called merit system, in Federal, State and Municipal governments since the passage of the Federal civil-service act in 1883;

c) The connection of the Civil Service Commission with all parts of the executive branch of the Government and the wide scope of its operations; and

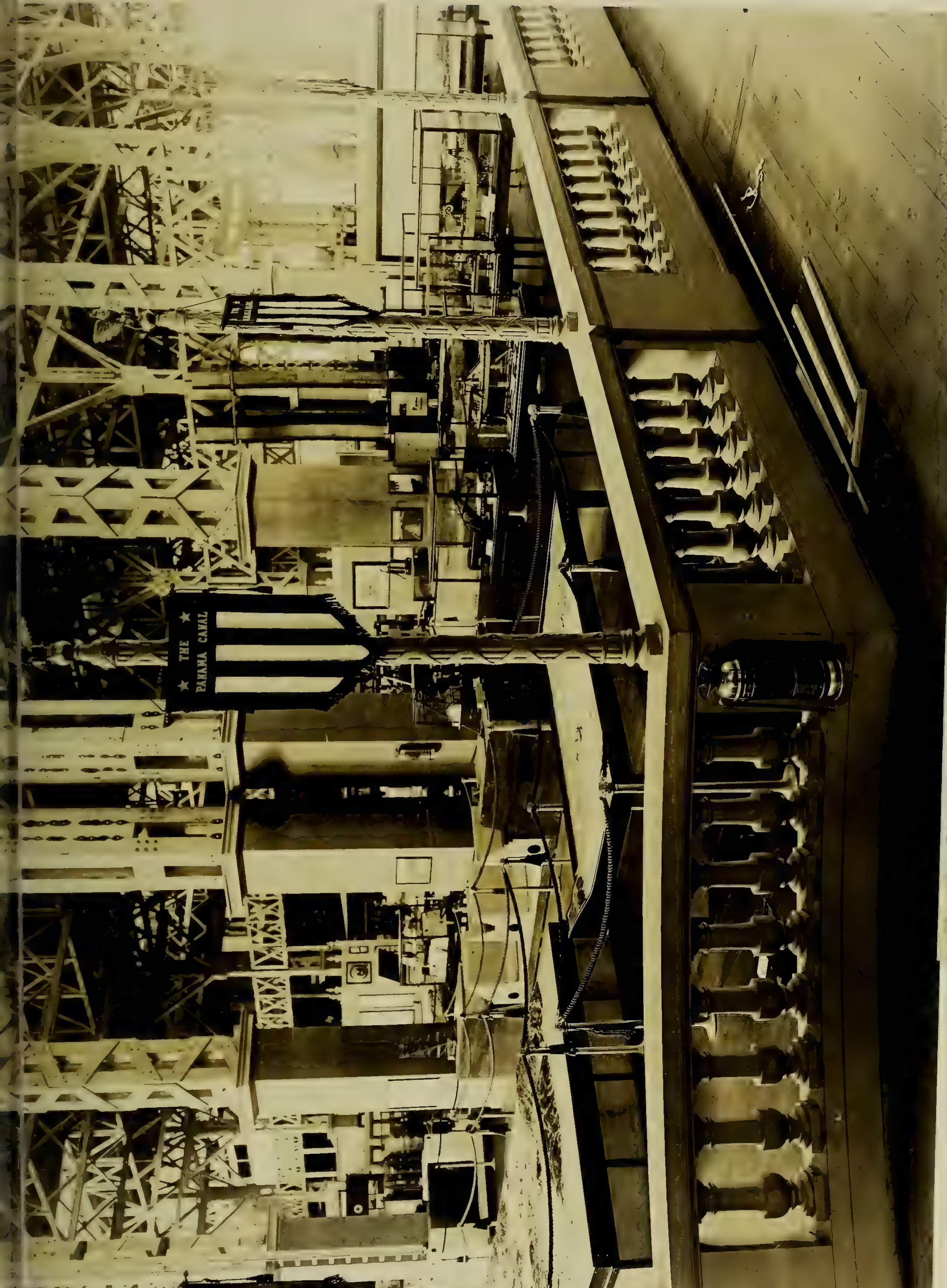
d) The practical nature of the examinations held by the Commission for entrance to the public service.

The Commission's organization was shown by means of a flashlight map of the United States,

operated by electric power. Miniature red, blue and white lights, flashed in rotation, indicated respectively the general headquarters at Washington, D. C., the headquarters of the twelve civil-service districts, and the locations in the United States and outlying possessions of 2755 local boards of examiners.

Graphic charts and maps presented, step by step, the progress of civil service reform in Federal, State and municipal governments. It is interesting to note that in 1883, the year the Federal civil-service act was passed, less than 14,000 positions were classified under the provisions of the act, while at the present time nearly 300,000 positions are so classified. These charts and maps were supplemented by a complete set of the annual reports of the Commission and a bibliography of publications relating to civil-service matters.

That the Civil Service Commission is closely related to every part of the executive service was shown by a series of colored pictures of Federal employees at work. These pictures were projected on a screen by means of an automatic stereopticon. The photographs were posed especially for the exhibit. The series comprised pictures of employees performing their work in different occupations, from the ordinary



U. S. Government, Panama Canal models

laborer, through the intermediate classes, to the highest-grade technical, scientific and professional positions.

Glass cases near the screen on which the colored pictures were displayed contained similar photographs together with descriptions of the examinations and the fundamental requirements for the different positions.

A display of the Commission's more important publications and many interesting photographs were also included in the exhibit.

This may be divided into two main parts, the exhibit of engineering features and the exhibit of the sanitary department.

Engineering Exhibit. The item of principal interest was a model of the Canal Zone about fifty feet long, constructed on a horizontal scale of 1 to 5000, and a vertical scale of 1 to 2500. This model was a faithful reproduction of the Canal Zone with all the principal features accurately depicted.

As the scale of this model was too small to show general details, additional models were exhibited which gave a better idea of certain important points.

On the Atlantic side of the large model there was found the Gatun Dam, with spillway and locks, on a scale, both horizontal and vertical, of one inch to one hundred feet.

Near the Pacific end a model of the Pedro Miguel Lock was seen, and also a typical section of a lock showing the gate operating mechanism. The celebrated Culebra cut and Cucaracha slide was depicted in a model seventeen and one-half feet square on a scale of one inch to twenty-five feet.

The various appliances used in constructing the Canal were represented by models, most of which were loaned by the contractors who furnished the actual machines; these are:

Ladder Dredge "Corozal", Suction Dredge "Culebra", French Ladder Dredge "Mole", 1000 cubic yard dump scow, Dipper Dredge "Gamboa", Suction Dredge "No. 86", Rock Breaker "Vulcan", model of dump, with flat cars, rapid unloader, track shifter and locomotive. Model of earth spreader, steam shovel and steel dump car; coal hoist and cableway.

Detail drawings of many important parts of the work were also available for those interested, and photographs showed the various stages of the work.

Albums containing additional photographs could be seen on application to the officials in charge of the exhibit.

The Sanitary Exhibit. This consisted of a model of Ancon Hospital, an exhibit of various disease carrying insects, and an exhibit of the tools and appliances used in the sanitary work on the Canal Zone. Photographs, charts, etc., were shown which gave the visitor a good idea of this important branch of the Canal work.

ON
ARTS.

The Commission of Fine Arts was organized by Act of Congress May 17, 1910. It consists of seven members, with headquarters in Washington. The purposes for which this Commission was formed were to maintain, restore and extend the original plan of the City of Washington prepared by L'Enfant under the immediate supervision of Presidents Washington and Jefferson. The surpassing merits of this plan were made manifest when city planning in the United States came to be studied after the World's Fair in Chicago in 1893.

The Commission of Fine Arts has advisory powers as to the public buildings, parks and works of

art in the District of Columbia and is consulted generally by the Committees of Congress and the executive departments in matters relating to governmental art.

The exhibit prepared by the Commission for the Exposition at San Francisco showed the development of the District of Columbia in accordance with the recommendations made since 1901. The aim of these recommendations is to secure for the capital of the United States such a systematic and harmonious development as shall make each improvement contribute to the carrying out of one general plan, and thus to create a high-organized, well-articulated, national capital. The plans as developed thus far, and as outlined for the future, give promise that in time Washington will become the finest of all capital cities.

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Founded on the Treaty of Geneva. The International Conference of Geneva, held in 1863, recommended that "There exist in every country a committee whose mission consists in cooperating in times of war with the hospital service of the armies by all means in its power."

The Geneva Convention of 1864 and the Geneva Convention of 1906, the latter held for the

purpose of revising the Treaty of Geneva (sometimes called the "Red Cross Treaty"), give definite status to certain officially recognized volunteer aid societies. These societies, because of the character of the insignia or badge adopted to distinguish their personnel and material (a Greek red cross on a white ground), are universally known as "Red Cross Societies".

The American Red Cross is intended to aid in the prevention and alleviation of human suffering in times of peace and war.

The original purpose for the organization of Red Cross societies was to supplement the medical services of armies in time of war. The great need, however, of a thoroughly trained and efficient organization, national in scope, and permanent in character, to render assistance after great disasters, has been so well established that many of the Red Cross societies have extended their functions to include relief operations in time of peace. Indeed, it has been proved that those societies which are most active in conducting relief and preventive measures in time of peace are best prepared to cope with the extraordinary requirements of war.

Recognizing this fact, the United States Congress, by the Act approved January 5, 1905, to incorporate the American National Red Cross and place it under Government supervision, declared its purposes (in addition to its duties in time of war) to be: "To continue and carry on a system of national and international relief in time of peace and apply the same to mitigating the sufferings caused by pestilence, famine, fire, floods, and other great national calamities, and to devise and carry on measures for presenting the same".

Although the American Red Cross has been constantly active in relief and educational work since its reorganization many people do not understand just what the American Red Cross is or what it endeavors to do. It is hoped that its exhibit in the Government section of the Palace of Liberal Arts illustrated in a small way what the people of the United States have done through their generous support of their National Red Cross.

The items making up the exhibit are as follows:

Panorama of Messina. This village is one of two, containing 2,400 houses, which the American

Red Cross erected during the relief work following the Italian earthquake of December 28, 1908, to shelter those made homeless by the disaster.

One village, adjacent to the ruined city of Reggio, was built in Calabria, and the second was located on the eastern coast of Sicily, adjoining the city of Messina.

Toward this work of relief, which also included the erection of American Red Cross Orphanage, the Elizabeth Griscom Hospital, and other miscellaneous work, American people contributed over one million dollars and Congress appropriated $800,000.

Light House. Since its reorganization in 1905, the American people have contributed in money and supplies through their National Red Cross, for the relief of suffering, approximately $12,000,000. This is at the rate of $1 every six seconds of the working day. The lamp of the light house was timed so as to flash once in six seconds to indicate the expenditure of a dollar.

Fields of Relief. Maps of North America, South America, Eurasia, and Africa. Each cross indicated a locality wherein the American Red Cross during the last ten years has rendered relief after disaster. A statement giving the amount expended after each disaster was also shown.

Chinese Famine Camp. During the famines which follow the destruction of crops from the overflowing of the Huai River in China, the people become so destitute that every earthly possession is sold or traded for food, and they ultimately become herded into camps, one of which it was endeavored to show here. In its relief work, in order to make its funds do double duty, the American Red Cross has employed the inhabitants of these camps to repair dikes, paying them for their services, not in money, but in grain. An effort was made to show the shelters used to house the people, their dress and manner of living; also the plan followed in excavating earth, in order that the quantity excavated could be easily measured by the paymaster, and the various methods employed for carrying earth, tamping the dike, etc. For Chinese famine relief, the American people have contributed $650,000. through the Red Cross, but this does not include the value of great quantities of donated food supplies.

Chinese River Conservancy. Map of China's great flood and famine district along the Huai River in North Kiangsu and North Anhui, showing plan of proposed work inaugurated by American Red Cross to present future flooding and consequent famines.

Flood Scene. Exact reproduction of havoc wrought in Hickory Street, Chillicothe, Ohio, by the raging waters of the great flood of 1913. For the relief of suffering caused by this flood the American people contributed to the American Red Cross the sum of $2,400,000.

San Francisco Refugee Camp. Reproduction of refugee camp number five, located in Golden Gate Park, after the fire of 1906, showing arrangement of camp, type of shelter tent, and methods of living of the refugees while in the camp.

Model of New Home. A model of the new home of the American National Red Cross at Washington, D.C., erected as a memorial to the women of the Civil War.

Mine Disaster. On November 13, 1909, there occurred in the second level of the St. Paul coal mine at Cherry, Illinois, a disastrous fire, which destroyed the lives of 256 men, being about one-half of the men of the city of Cherry. This model was intended to explain how this occurred. In the Cherry mine, the cage (elevator) in the main shaft went no lower than the second level. In order to replenish the feed supply of the mules used in the lower workings of the mine, there was lowered to the second level a load of hay, which was placed on a car to be hauled to

the ventilating shaft, to be again lowered to the third level, in which the stables were located. A short time previous to the day of the disaster, a break had occurred in the electric light system, and torches had been installed in the mine workings to replace electric lights. While being hauled through a tunnel on the second level the load of hay came in contact with a torch and immediately took fire. The flames spread throughout the workings, burning out the timbers which supported the roof of the passages and destroying the hoisting apparatus. Seeing the smoke and flames belching from the main shaft, the engineer at the power house unfortunately reversed the fan in an effort to save the main shaft, but this action resulted in the flames being sucked up the ventilating shaft, thereby destroying the sole remaining means of escape for those underground. After the shafts had been fire-swept, no man escaped, except 21 who walled themselves in a recess and lived for seven days in this underground pocket, where they were discovered by a rescue party. For the relief of the widows and orphans of the victims of this disaster there was collected by the Red Cross the

sum of $98,200. From this fund pensions are still being paid to the mothers of children too young to legally accept employment.

Insignia and Medal Exhibit. Display of insignia worn by the officers, nurses and members of the American Red Cross and by the members of its Life Saving Corps. Also medals bestowed by the President upon those rendering unrenumerated volunteer services of value to the organization.

Models of Houses built by the American Red Cross after disasters, as follows:

Three-room houses. Built in Zanesville, Ohio, during the relief work after the great flood of 1913. Cost approximately $600 each.

Houses built in the Muskingum Valley in Southeastern Ohio after the flood of 1913. Cost approximately $200 each.

Houses erected by the American Red Cross in Italy after the earthquake of 1908.

Houses built from Relief and Red Cross Funds in refugee camp to shelter the homeless after the San Francisco fire of 1906.

Houses erected at the expense of the American Red Cross by sufferers from the forest fires in northern Michigan in 1908. These houses were built

on the "building bee" plan, a group of neighbors building a home for each of the group in turn. Two weeks after one fire, 38 families in one community were living in these houses, which occupied the sites of their destroyed homes, and 24 were in course of construction. The cost of each was about $50.

Instruction in First Aid to the Injured. Cabinet of illuminated transparencies illustrating educational work conducted by the Bureau of Medical Service through its First Aid Department. This Department has two railway cars, constantly on the road, the physicians in charge giving instructions to railroad, lumber, mine, telephone, and other industrial employees. Life saving methods were also illustrated.

First Aid Boxes. Pouches, outfits, etc. assembled by the First Aid Department of the American Red Cross, for use in factories, schools, gymnasiums, homes, on railroad trains, automobiles and repair wagons, and by firemen, police, boy scouts and others who have been trained to render first aid to the injured.

First Aid Text Books. Published by the First Aid Department of the American Red Cross, and samples of articles contained in its first aid boxes.

Panoramas. Panoramas illustrating the three classes of work performed by the Nursing Service.

Town and Country. Through this Service the American Red Cross furnishes visiting nurses for small towns and rural districts of the United States. Red Cross visiting nurses have had special post graduate preparation for public health nursing and are appointed to communities where a local nursing organization is affiliated with the Town and Country Nursing Service.

War. Enrolled Red Cross Nurses form the reserve for the Army and Navy Nurse Corps; 6,000 would be available in the event of war.

Disaster. All Red Cross Nurses available for duty, but those nearest the scene of disaster would respond to first call.

Uniforms of Red Cross Personnel. Surgeon; visiting nurse with outfit; enrolled Red Cross nurse.

Stereomotograph. Automatic projection apparatus showing lantern slides illustrative of various Red Cross activities. A different set shown each day of the week.

Red Cross Christmas Seals. Display of water color enlargements of the various issues of Christmas

Seals from 1907 to 1914, and statement of funds raised by their sale for anti-tuberculosis work.

Wing frames containing photographs and charts.

Visitors desiring information concerning the organization or activities of the American Red Cross may have literature sent to their home addresses. Blank cards were furnished at the exhibit.

T OF LIB-
C CONGRESS.

The exhibit of the Library of Congress was prepared with a view to instruct the public in its resources, scope, cooperation with other libraries, and to show graphically the activities of the individual divisions of the library.

The inter-Library loan feature, whereby books may be obtained from the Library of Congress, through the medium of a local library, is the link which brings the National Library in touch with the people. This feature was explained to those who desired to learn of its operation by the attendant, and it is also outlined in the publication "The Library of Congress", page 15, which could be read there.

On the wall space of the exhibit were arranged twenty-two photographic enlargements, showing the exterior and interior architecture, division and exhibit halls, of the Library of Congress building, Washington, D. C., together with its plan. There were also on the wall six lunettes by Alexander showing "The Evolution of the Book", beginning with oral tradition and ending with the invention of printing with movable type. Another series of pictures portrayed foreign libraries, Athens, Berlin, Copenhagen, St. Petersburg, Vienna, etc., enabling the visitor to compare our national library with them. A large statistical chart based upon statistics collected by the Bureau of Education and graphically illustrated by the Library of Congress, showed the growth of libraries in the United States from 1875 to 1913.

The work of the Library of Congress was shown by exhibits of its several divisions.

The printed catalogue card was the product of the Catalogue Division and Card Section combined, one preparing the copy, the other printing and distributing it. To show this work entire sections of the card catalogues of the Library were reproduced and shown in

three catalogue cases, containing:

1) A sixty-tray dictionary catalogue of works of Z Class, Bibliography and Library science.

2) Thirty trays of the same in shelf list form.

3) Thirty trays of an A. L. A. list of 2000 books for a Library.

4) Ninety trays of cards on works relating to Spanish America.

5) Thirty trays containing the cards for publications of the Department of Agriculture; and

6) A number of miscellaneous catalogues of publications of different bureaus of the Government, such as the Bureau of the Census, Education, Labor, Mines, Standards, U. S. Geological Survey, National Museum, Public Health Service, and Smithsonian Institute, and a subject catalogue on buying and selling. These catalogues were prepared by withdrawing the cards from stock in the Librady of Congress.

The best known feature of the Library of Congress is the cooperation in cataloguing and printing cards for all publications and furnishing printed cards to a great number of libraries in the United States,

aside from depositing one card in each of the depository libraries designated as such. The manner of obtaining cards, their use, the use and purchase of proof sheets, the subscription to cards by subject, every phase of the work the Library is carrying on was fully explained by hand books, available free of charge at the exhibit. To show the thoroughness of the exhibit, one had to get a set of cards, showing on marginal notes the necessary change to fit cards for entry in catalogue. A complete set of the publications of the Library of Congress were on exhibit, embracing besides the annual reports, the catalogues of maps, music and prints, the volumes of the Continental Congress, the Virginia Company's books, also the publications issued in cooperation with A. L. A. and the monthly list of State publications.

The blanks and forms used in the different divisions of the Library of Congress were systematically placed in binders for the convenience of interested visitors. A full set of copyright catalogues, embracing the four groups, also were to be found.

Of great historical interest was the case of manuscripts and broadsides, shown by the Manuscript Division. Prominent among them were the autographs

letters of Presidents Washington, Adams, Jefferson, Madison, Monroe, and Jackson, the material relating to colonial Virginia and Massachusetts, the Revolutionary war, the Mexican war, and the Philippine Islands; manuscripts of the Floridas under Spanish regime showed the ravages of tropical insects. The articles of Association of the First Continental Congress, 1774, with the signatures of the members, deserve mention.

The Map Division showed in more than thirty maps, dating from 1535 to 1720, the development of the Western hemisphere, and California in particular. Noteworthy are the maps showing California as an island as late as 1713 after the correct form of a peninsular had been used for many years.

Another case was devoted entirely to the City of San Francisco, showing the growth of the city from 1846 to the date of the opening of the Panama-Pacific International Exposition. Among these prints were some very rare and quaint ones hardly to be seen elsewhere.

The collection of newspaper material, illustrating the development in communication and transportation, was taken from American newspapers from the files of the Periodical Division, beginning with

the year 1800. The announcement of a new stage route is followed by Fulton's report of the first successful trip on the Clermont. The account of the crossing of the ocean by the Savannah did not take more than sixteen lines in a single column. The "Stourbridge Lion" and the "Best Friend in Charleston", the first telegraph line in 1844, the discovery of gold in California in 1848, the admission of California to the Union, the laying of the Atlantic cable, the telephone, Marconi's discovery, the Pacific cable, the aeroplane flight across the continent, and the opening of the Panama Canal are items crowded into the short space of a little over a century.

The wood engravings in color, which the Prints Division showed, are the work of a California artist. The wood engravings and etchings exhibited were selected with a view of showing the high grade of perfection attained in this line of work.

The well-known "Lists" of the Bibliography Division were mounted on a round shaft, permitting the visitor to look over the titles in an easy manner. These lists are too well known among librarians and the public to need any further explanation.

The first wall case contained early works of voyages around the world. Notable among them were the accounts of Drake, Cooke, and interesting to Californians a first edition of Dana's "Two Years Before the Mast".

The second case contained many valuable books relating to California and the Spanish possessions in America. The student found in this collection an assembly of books not to be found elsewhere. These volumes formed the exhibit of the Reading Room.

Wall case No. 3 contained early American music - - modest looking first editions of our most popular songs, "Old Folks at Home", "Tramp, Tramp, Tramp", copies of the so-called songsters, small collections of popular songs, and first and last editions of McDowall and a few other American authors. The last case contained foreign music. Expounding the theory of music in 1512 we find a book by Goffurio Franchino, two librettos of 1600, illustrating the first attempt at opera; leaders' scores of modern composers, Strauss, a facsimile of Handel's Messiah lithographed, collection of music pieces 1796 and Wagner's operas and dramas.

An all-steel stack of the Snead type showed the construction of the book stacks in the Library of

Congress. A circulating library for the use of Government employees on duty at the Exposition was placed therein.

The Government in action was best illustrated by pictures in motion. This method of presentation was, therefore, utilized freely to show many Governmental agencies which were shown only imperfectly by other means. Three rooms were provided for that purpose, located respectively in the Palace of Liberal Arts, of Mines and Metallurgy, and of Machinery.

The room in the Palace of Liberal Arts was specially equipped for lectures which required the use of lantern slides as well as motion pictures. In it the morning program was confined to the latter, but the afternoons were occupied by "picture talks" as follows:

1.00 P.M. "Forest Convervation" by Mr. Don Carlos Ellis, U.S.Forest Service, Department of Agriculture.

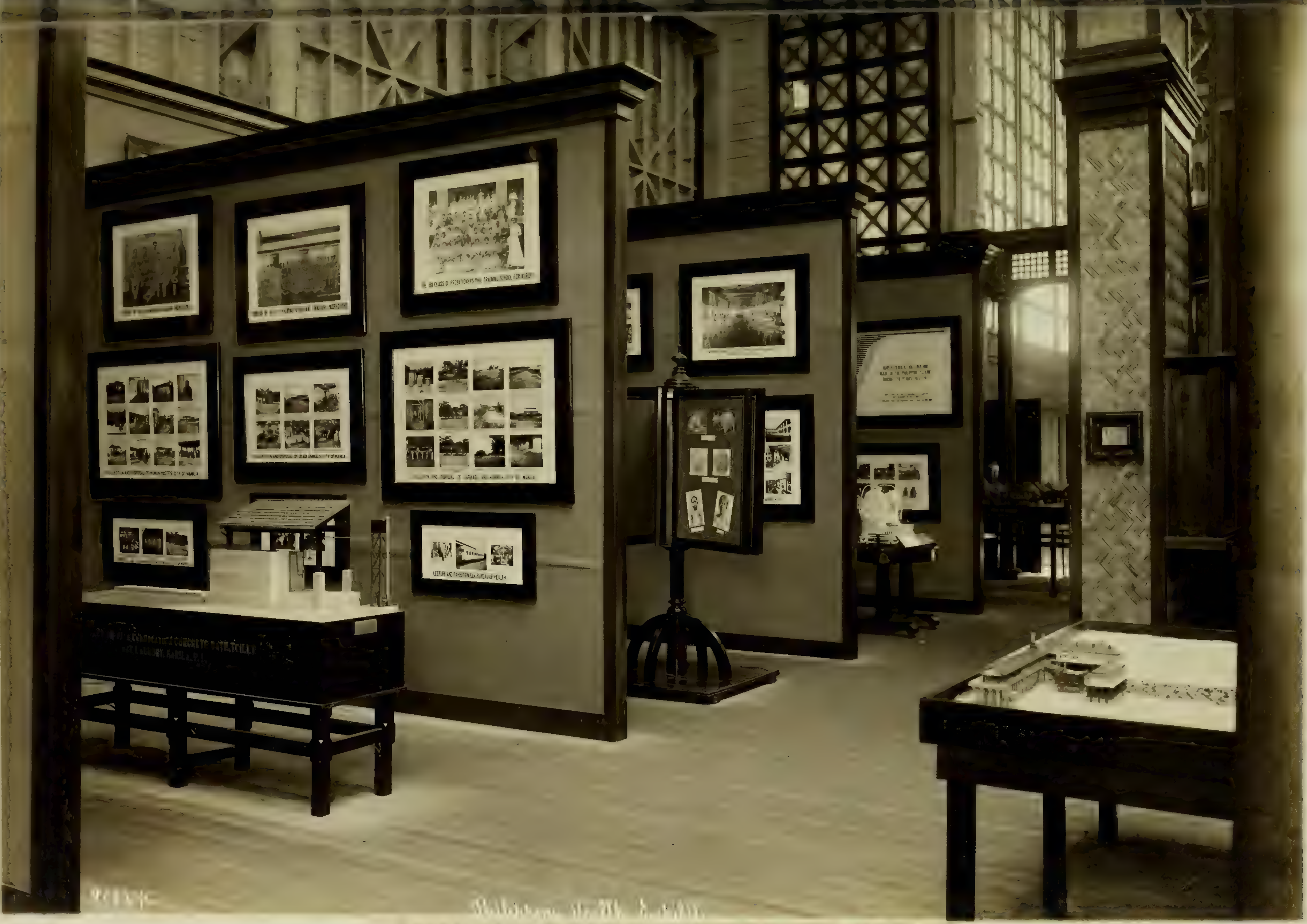
2.00 P.M. "Road Building", by Mr. M. O. Eldridge, Office of Public Roads, Department of Agriculture.

3.00 P.M. "Reclaiming the Desert", by Mr. C. J. Blanchard, U.S. Reclamation Service, Interior Department.

4.00 P.M. "The National Forests", by Mr. Don Carlos Ellis, U.S. Forest Service, Department of Agriculture.

The motion pictures shown in the lecture room in the Liberal Arts Palace were as follows:

Romance of Irrigation
Uncompahgre Reclamation Project,
Boise Reclamation Project
Arrowrock Dam, Boise and Minidoka Reclamation Projects
America's Valley of the Nile
Rio Grande Reclamation Project
Grand Valley Project
Huntley Project
Salt Lake Project
Truckee-Carson Project
Road Construction and Maintenance
Bituminous Road Construction
Macadam Road Construction
Gravel Road Construction
Testing Rock for Road Building
Testing Cement for Concrete
A Forest Fire
Panama Canal Construction
Blazing a trail in Glacier National Park
"Before the Doctor comes", illustrating first aid to the injured.
Training for a Livelihood in a trade school for girls
Physical training of Washington, D.C. school children.



Philippine Health Photographs and Models

PHILIPPINE ISLANDS.

Speaking of the Insular possessions of the United States Government, we will begin with the Philippine Exhibit. The Philippines more than anything else illustrated the possibilities of their country as covered in Group 29 through its Bureau of Printing, which was considered one of the most complete of its kind in the Orient.

In Group 30, Books and Publications, we find a great many exhibits especially of the individual and establishments giving illustrations of book binding and ruling of histories, together with various books on medicine, music and law. Some of them covered very fine fiction, written in Spanish and English.

Group 31, Maps for Geography, Cosmography and Topography, was quite well represented by the Bureau of Forestry at Manila in a very fine map giving detail description of the various woods in the Island. The Bureau of Science had a fine relief map of scientific details. The Government of the Philippines had a complete map also covering the entire Islands which is made out in intelligent detail.

Group 32, Manufacture of Paper. This was represented by some excellent papier mache work and

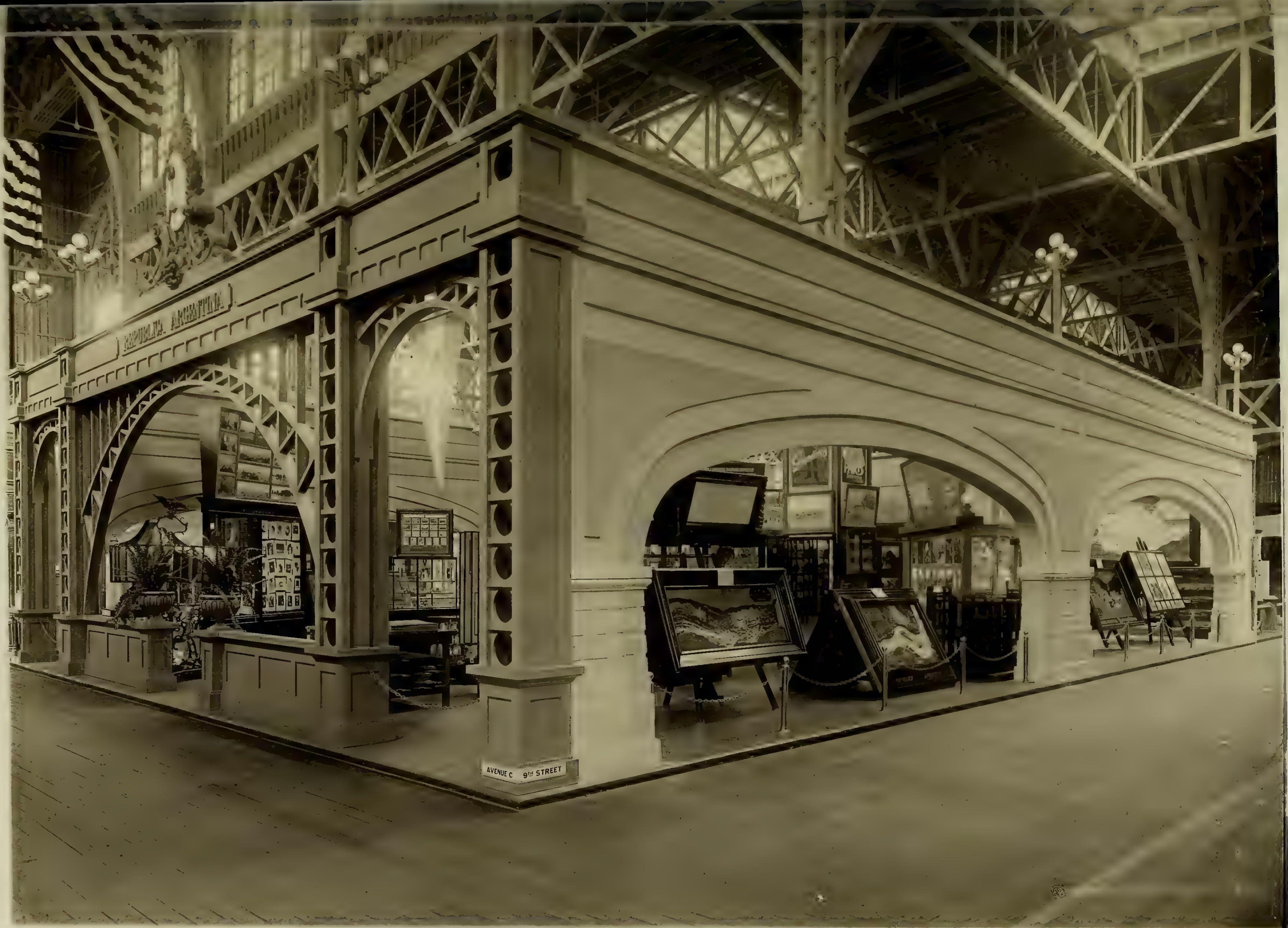
raw material such as paper pulp, shown by the Mercantile College of Manila, Bureau of Agriculture and Bureau of Forestry.

Group 33, Photography, was another group pretty well represented in the number and kinds of photographs, both scenic and portrait. There were some very clever photo-transparencies and pictorial photographs. These were shown by individuals, and by the Bureau of Public Works, the Bureau of Printing and the Government of the Philippine Islands; also by the Siliman Institute, and University of Santo Tomas.

Group 35, Medicine and Surgery, was not covered to any great extent except by the University of Santo Tomas of Manila by an X-Ray Cabinet display.

Group 36, Chemical and Pharmacal Arts, gave concerns a chance of exhibiting some of their fine perfumes, which were displayed by Compania Generale de Tabacos des Filipinas of Manila, B. Gallardo Tacloban, and Manila Commercial Company.

Group 37, Musical Instruments, were shown by the Government of the Philippines and the Province of Pampanga, consisting of musical and string instruments, the latter being used in the majority.



Argentina

The Philippines are particularly well known for their love of string instrument music and the faculty of bringing out the sweetest tones. We find by the exhibit that this was the most interesting feature of all their displays, except that showing the raw hemp and machinery equipment for preparing same.

Group 43, Architectural Engineering. There were some very clever drawings, etc. of several buildings and other public institutions exhibited by the Government of the Philippine Islands.

ARGENTINA.

Argentina was well represented in many of the groups by attractive exhibits, the following being a brief classified summary:

In Group 29, Typography and Printing Processes, were exhibited daily newspapers, books and the various printing processes for making same, together with magazines, labels, albums, etc.

Group 30, Books and Publications and Book Binding, was well represented by many of the large newspapers published in the Argentine, and also books and other publications covering a wide range of subjects, interesting to the general public.

Group 31, Maps and Apparatus for Geography, Cosmography and Topography, was represented by concerns exhibiting maps and photographs of the country, customs, etc. and methods of manufacturing same.

In Group 32, Manufacture of Paper, Rossi and Lavarello, of Buenos Ayres, exhibited pasteboard and photographic cardboards.

In Group 33, Photography, there were exhibited many pictures, the majority by individuals, of every description, photogravures and zinc plates. This group was particularly well represented, some of the photographs being very wonderful and very interesting to exhibitors.

Group 34, Instruments of Precision, Philosophical Apparatus, etc., was represented by an exhibit of Gottuzzo & Cia. consisting of medals and engravings.

Group 35, Medicine and Surgery, was well represented by doctors and companies exhibiting orthopedic articles, works on obstetric, and manifold medical publications and photographs.

Group 36, Chemical and Pharmacal Arts, was well represented by exhibits of various patent medicines, acetylene gas generators, medical cotton, etc.

Group 37, Musical Instruments, was represented by concerns displaying violins and other musical instruments, and musical publications.

Group 40, Civic and Military Engineering, was represented by models, technical Military works and publications.

Group 41, Models, Plans and Designs for Public Works. Argentina is noted throughout the world for its achievements in wharves, squares and public buildings, and this group was well represented by a number of models and publications on same.

Group 42, Architecture, was represented by a display of plans and architectural publications.

Group 43, Architectural Engineering, showed plaster models and plans.

AUSTRALIA.

The exhibits by this Country covered some of the groups in the Department of Liberal Arts, as follows:

Group 30, Books and Publications and Book Binding, was covered by a number of newspaper companies showing their periodicals and The Government Printer displayed some artistic book bindings.

Group 31, Maps and Apparatus for Geography, Cosmography, and Topography, showed a number of maps exhibited by various Government Departments.

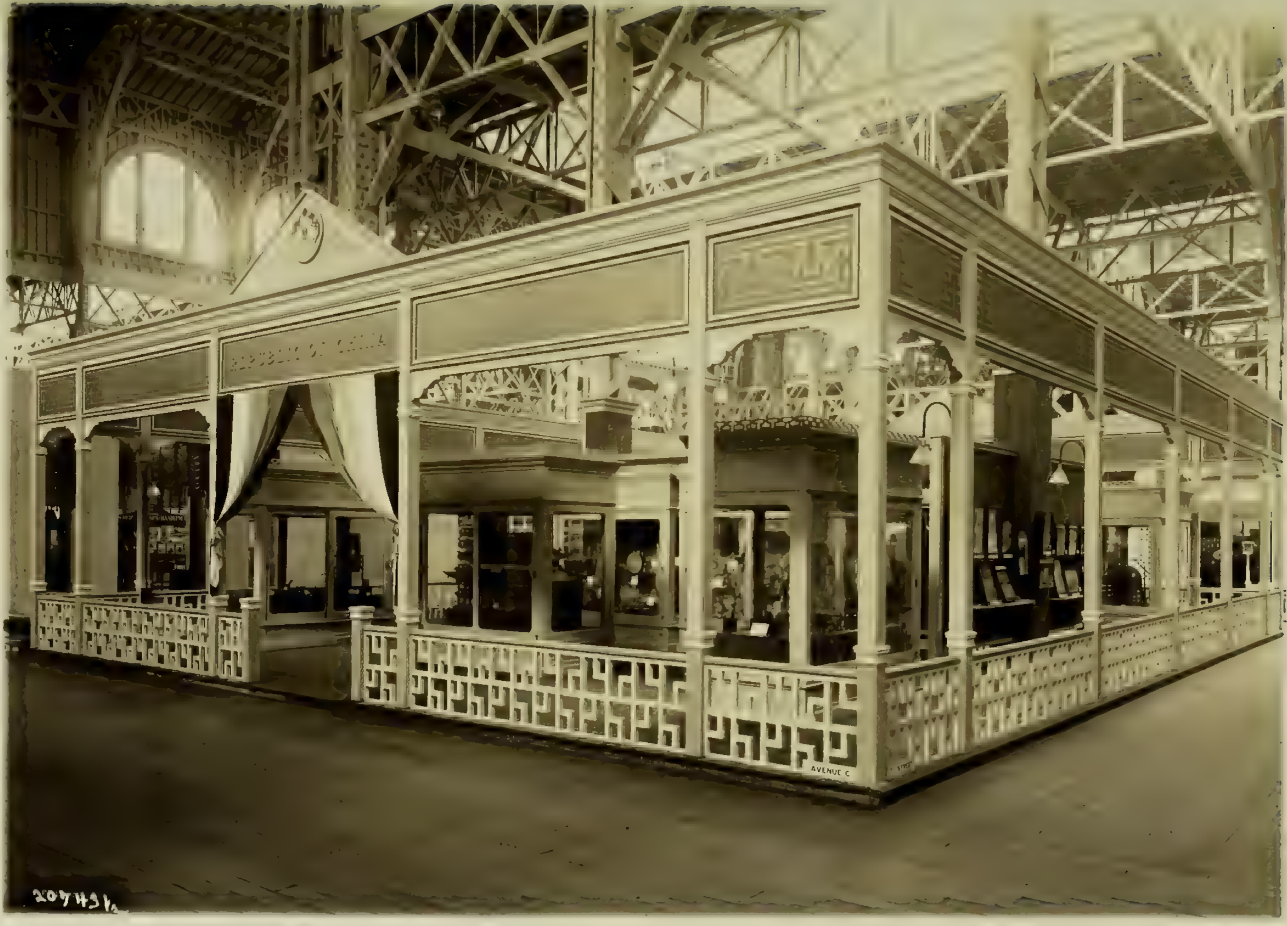
Group 33, Photography, was also represented by Departments of the Government and Mr. H. W. Mobsby of Brisbane exhibited some photographic enlargements.

Group 36, Chemical and Pharmacal Arts, was represented by three companies exhibiting wood distillation products, soap, boot polish, lino polish and glue, and by the Technological Museum of Sydney, which displayed essential oils.

Group 43, Architectural Engineering, was represented by the Works Department of Brisbane, in a display of a model of a school building.

CHILE.

Group 30, Books and Publications and Book Binding, was represented by Alberto Marquez, who exhibited in the Liberal Arts Department office a book entitled "Libro Internacional Sud-Americano".



China

CHINA.

China was represented in a number of the Liberal Arts Department groups, summarized as follows:

Group 29, Typography and Various Printing Processes, was covered by exhibits of copper plate, engravings, electrotype, etchings, Chinese typewriter, etc.

Group 30, Books and Publications and Book Binding, was represented by publications on history, mathematics, books in English, etc.

Group 32, Manufacture of Paper, was well represented by manufacturers of various kinds of paper such as fancy paper, glass, gold dust, mulberry skin, bamboo and copy papers.

Group 33, Photography, was represented by various concerns and the Chili Commercial Museum of Tientsin exhibiting pictures, photographs and mounts.

Group 34, Instruments of Precision, Philosophical Apparatus, etc., Coins and Medals, was represented by exhibits of sundials, eyeglasses, surveying instruments, laboratory apparatus, compasses, etc

Group 35, Medicine and Surgery, was represented by exhibits of anatomical models.

Group 36, Chemical and Pharmacal Arts, was very thoroughly represented by a number of exhibitors showing all kinds and descriptions of chemicals. Pastes, pills, cough medicines, oils, face powder, toilet water, essences, tooth powder, China root and an endless variety were displayed.

Group 37, Musical Instruments, was represented by displays of flutes, harps, organs, violins, guitars, banjos, drums and other instruments.

Group 38, Theatrical Appliances and Equipment was represented by Yi-Chung-Hoa of Tientsin, who showed an exhibit of armour, etc.

Group 43, Architectural Engineering, was represented by construction models, and a model of a Buddhist Pagoda.

CUBA.

This country had a very large display in Group 30, of Books and Publications and Book Binding. Large publishing houses exhibited magazines and newspapers from all over the Republic.

In Group 36, Chemical and Pharmacal Arts, were exhibited samples of soap, animal curative and drugs.

DENMARK.

Group 29, Typography and Various Printing Processes, was represented by Martins Truelsen of Copenhagen, who exhibited black and color printings, lithography and engravings.

Group 30, Books and Publications and Book Binding, was represented by Jacob Baden, who showed artistic book binding.

Group 33, Photography, was an exhibit of pictorial photography by R. Nielsen of Ringsted.

Group 37, Musical Instruments, was represented by an exhibit of a piano by Hornung and Moller, of Bredgade.

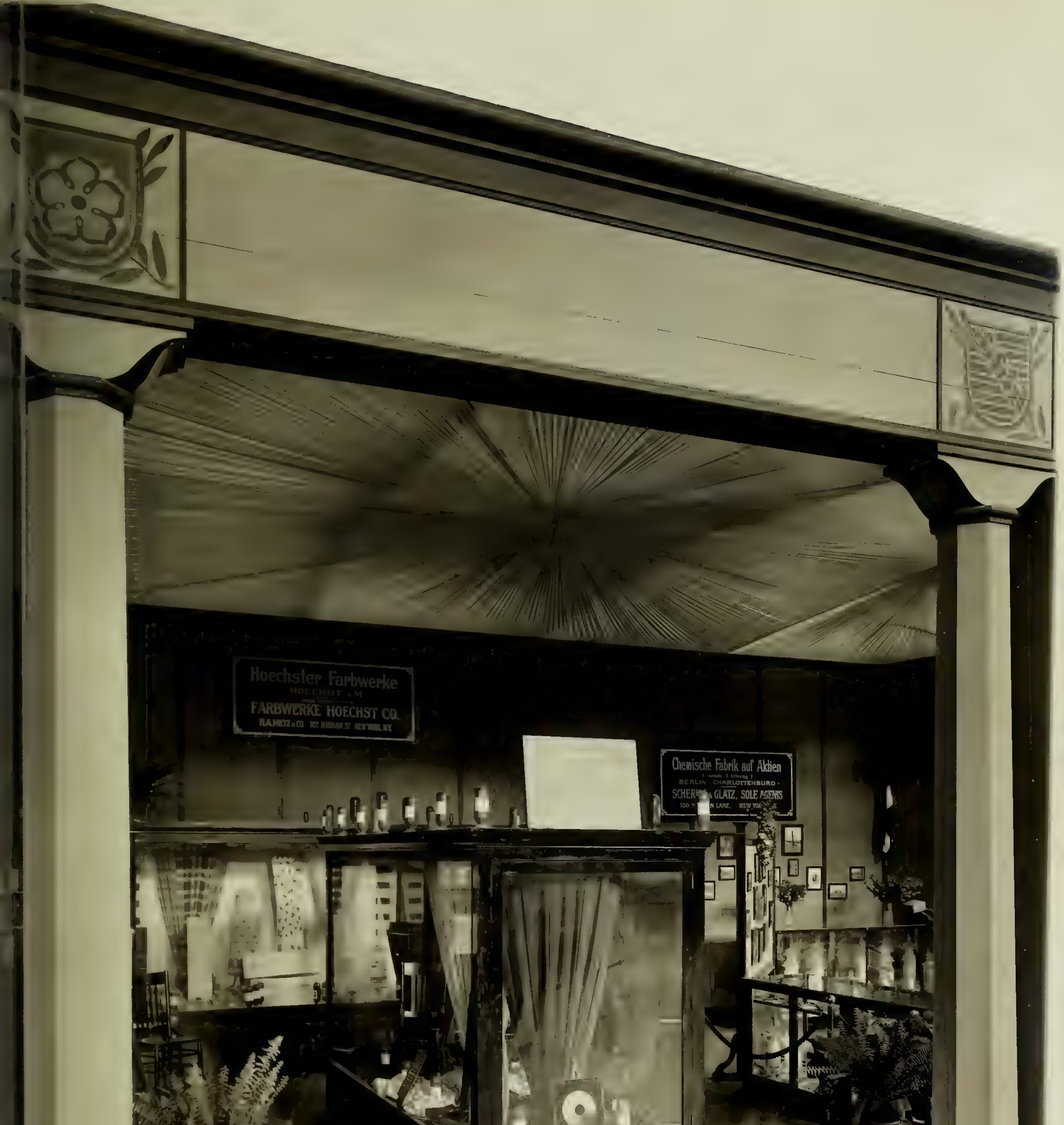
FRANCE.

Was represented in some of the groupings as follows:

Group 29, Typography and Various Printing Processes, was represented by a number of exhibits.

Group 30, Books and Publications and Book Binding, was likewise represented by a number of French concerns with their exhibits.

Group 33, Photography, contained exhibits of eight individuals and companies.


Hoechster Farbwerke
HOECHST a M
FARBWERKE HOECHST CO.
H.A.METZ & CO. 122 HUDSON ST NEW YORK, N.Y.
Chemische Fabrik auf Aktien
BERLIN · CHARLOTTENBURG ·
SCHER & GLATZ, SOLE AGENTS
150 N LANE, NEW YOR
3639

Part of German Section

Group 34, Instruments of Precision, Philosophical Apparatus, Coins, Medals, etc., was represented by a number of exhibits in the Palace of Manufactures.

Group 35, Medicine and Surgery, was likewise very well represented in the Palace of Manufactures.

Group 36, Chemical and Pharmacal Arts, had a number of exhibits.

Group 41, Models, Plans and Designs for Public Works, was represented by ten exhibitors.

Group 42, Architecture, was represented by a very full display of exhibits.

GERMANY.

Group 29, Typography and Various Printing Processes, was represented by exhibits of Deutsche Verlagsanstalt of Stuttgart and R. Voigtlaender of Leipzig.

Group 30, Books and Publications and Book Binding, contained a large number of interesting exhibits.

Group 31, Maps and Apparatus for Geography, Cosmography and Topography, was covered by an exhibit of Velhagen & Klasing, of Bielefeld and Leipzig.

In Group 33, Photography, there were five exhibitors.

Group 34, Instruments of Precision, Philosophical Apparatus, etc. Coins and Medals, was represented by an exhibit of the Account-O-Graph Calculating Machine Company.

Group 35, Medicine and Surgery, had several exhibits.

Group 36, Chemical and Pharmacal Arts, was covered by exhibits by eight concerns.

Group 37, Musical Instruments, showed an exhibit by M. Hohner, of Trossingen.

Group 38, Theatrical Appliances and Equipment, showed an exhibit by L. Leichner, of Berlin.

GREAT BRITAIN.

In Group 29, Typography and Various Printing Processes, there was an exhibit of slug-casting machinery.

Group 34, Instruments of Precision, Philosophical Apparatus, etc. Coins and Medals, showed exhibits of navigation instruments and a calculating machine.

Group 35, Medicine and Surgery, contained an exhibit of oxygen breathing apparatus by Gorman Siebe & Co., Ltd. of London.

Group 36, Chemical and Pharmacal Arts, was represented by an exhibit of tintometer apparatus exhibited by The Tintometer, Ltd. of Salisbury, and by an exhibit of tarammonia, shown by the Gas Light and Coke Co. of London.

GUATEMALA.

Group 29, Typography and Various Printing Processes, was represented by an exhibit of publications and Government printing, shown by Typografia Nacional.

Group 30, Books and Publications and Book Bind, was represented by exhibits of sheet music, and other publications.

Group 33, Photography, was represented by two exhibits of photographs.

Group 36, Chemical and Pharmacal Arts, was represented by displays of stearine-paraffin, soap, face-powder and calcium phosphate,

Group 37, Musical Instruments, contained three exhibits of amatitlan, guitars, and other instruments.

Group 40, Civil and Military Engineering, was represented by F. Novela, of Guatemala, who showed an exhibit of Portland cement.

HONDURAS.

Group 29, Typography and Various Printing Processes, showed exhibits of lithography, printing photo engraving, and other forms of printing.

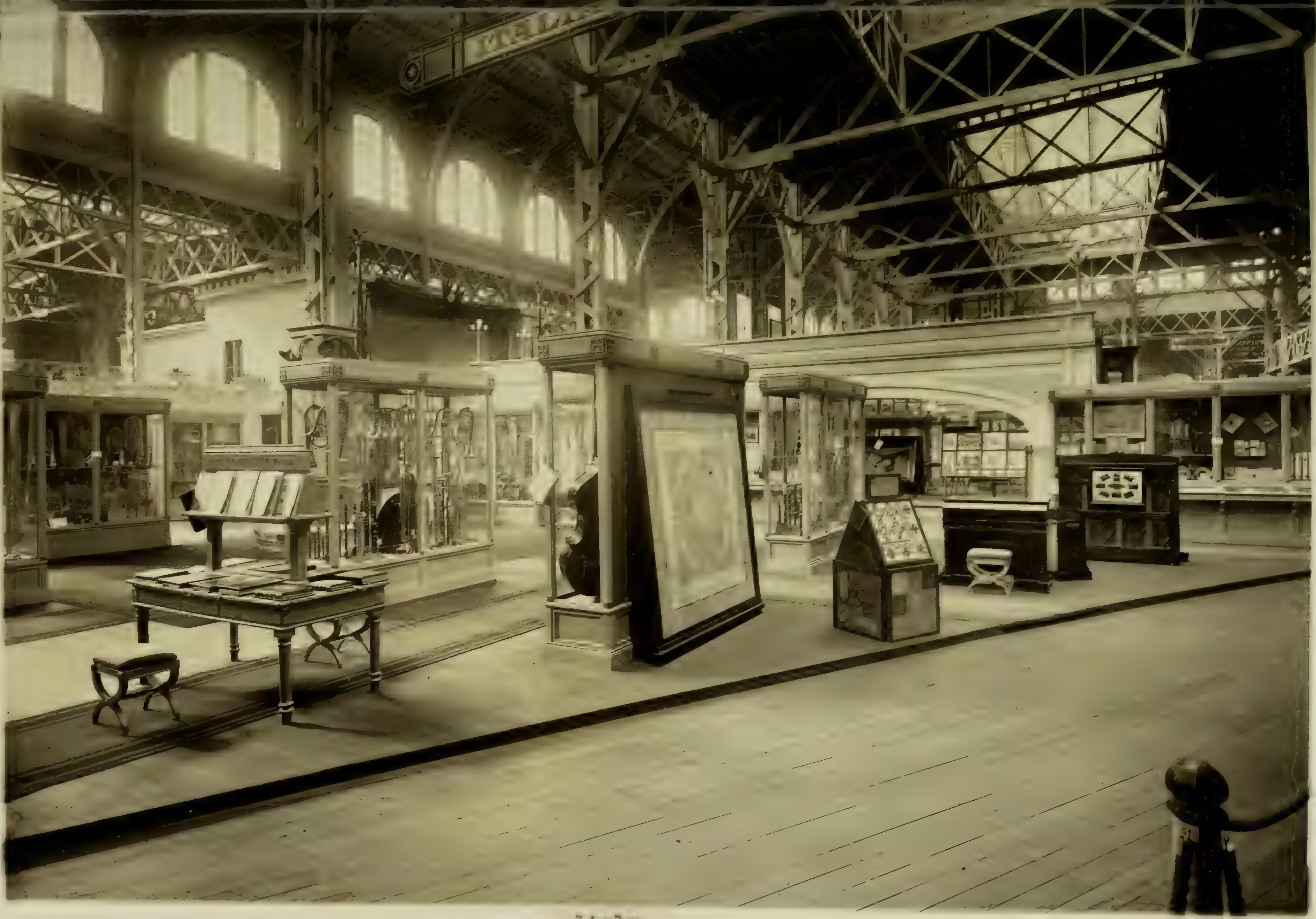
Group 30, Books and Publications and Book Binding, was very well represented by a number of concerns exhibiting publications on every subject, newspapers, magazines, etc.

Group 35, Medicine and Surgery, contained an exhibit of an injector apparatus by Dr. Teofilo F. Zelaya, of Tegucigalpa.

Group 36, Chemical and Pharmacal Arts, had exhibits of dentrifice liquor and paste, pomatum for freckles, soaps, candles, perfumes, etc.

Group 37, Musical Instruments, showed interesting displays of guitars, mandolins and violins.

Group 39, Electrical Methods of Communication, contained an exhibit of telegraph and telephone implements.



Italy

Group 42, Architecture, contained architecture details and tiling.

ITALY.

Group 29, Typography and Various Printing Processes, showed an exhibit by the Royal School of Engravings at Rome.

Group 30, Books and Publications and Book Binding, contained seven exhibitors showing publications of different kinds, artistic editions and guides.

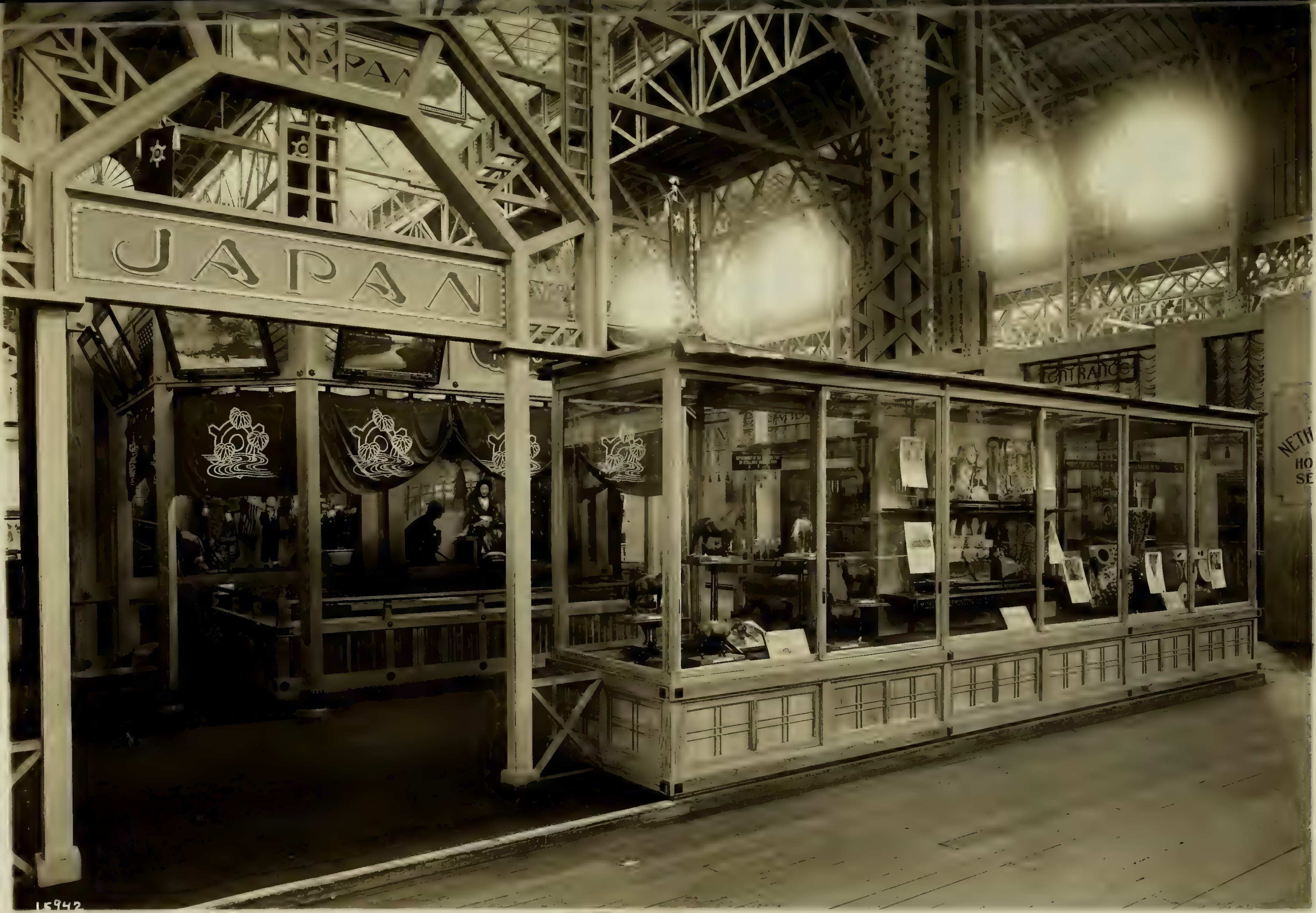
Group 31, Maps and Apparatus for Geography, Cosmography and Topography, contained an exhibit of the International Institute of Agriculture at Rome of charts and tables.

Group 32, Manufacture of Paper, had four exhibitors.

Group 33, Photography, had two exhibits of photographs.

Group 35, Medicine and Surgery, had four exhibits of medicines and medicine products.

Group 36, Chemical and Pharmacal Arts, was fairly well represented by exhibits of chemical products, soaps, perfumes, candles, pigments, sumach, drugs and acids.



Japan

Group 37, Musical Instruments, was well represented by all kinds of musical instruments exhibited.

JAPAN.

Group 29, Typography and Various Printing Processes, was represented by an exhibit of postal stamps by the Department of Communication.

Group 32, Manufacture of Paper, contained numerous exhibitors showing all kinds of printing, copying, handmanufactured, drawing and other papers.

Group 33, Photography, was represented by some interesting pictures and photographs.

Group 34, Instruments of Precision, Philosophical Apparatus, etc., Coins and Medals, contained exhibits of seismological instruments, seismograms, coins, medals, testing instruments and prism filed glasses; also exhibits of students' work at the Tokyo Higher Technical School.

Group 35, Medicine and Surgery, had exhibits by Genzo Shimazu and the Tokyo Imperial University.

Group 36, Chemical and Pharmacal Arts, was represented by a great number of concerns exhibiting all kinds of chemicals, etc., such as peppermint oil, camphor, insect powder, incense, various Japanese essences,matches, fireworks, menthol and calcium acetate.

Group 37, Musical Instruments, showed guts, musical instruments, drums and phonographs.

Group 39, Electrical Methods of Communication, contained a wireless telegraph exhibit by the Department of Communication.

Group 40, Civil and Military Engineering, showed a model of Osaka Castle by the Osaka Municipality.

Group 41, Models, Plans and Designs for Public Works, had models of various works by the Municipalities of Kobe, Osaka, Tokyo and Yokohama.

Group 42, Architecture, had an exhibit of a model of Nikko Shrine by the Department of Home Affairs.

Group 43, was an exhibit of a Tea House by The Japan Central Tea Association.

NETHERLANDS.

In Group 29, Typography and Various Printing Processes, the Netherlands had an exhibit of lettertypes and art printing.

Group 30, Books and Publications and Book Binding, was represented by an exhibit of bookbinding by Messrs. Mouton & Co., of the Hague.

Group 31, Maps and Apparatus for Geography, Cosmography and Topography, was represented by exhibits of relief maps, maps showing steamer routes, marine charts, etc.

Group 32, Manufacture of Paper, was represented by one company and the Netherlands Government exhibiting money paper, stamps, etc.

Group 33, Photography, was represented by the Netherlands East Indian Commission with an exhibit of colored photographs.

Group 35, Medicine and Surgery, showed displays of bandages and instruments of dentistry.

Group 36, Chemical and Pharmacal Arts, had exhibits of gouda, glycerine, Stearine, rubber gum, copal, and white ant powder.

Group 40, Civil and Military Engineering, had an exhibit of road machinery.

Group 41, Models, Plans and Designs for Public Works, consisted of exhibits of the map of the City of Amsterdam, statistics of Rotterdam, road machinery and irrigation designs and drawings of seaports.

NEW ZEALAND.

In Group 29, Typography and Various Printing Processes, there were exhibits by the Department of Agriculture, Industries & Commerce and by the Post and Telegraph Department of postage stamps, etc.

Group 33, Photography, contained many photographs, portraitures, marine views, etc.

Group 37, Musical Instruments, consisted of an exhibit of violins.

NORWAY.

Group 32, Manufacture of Paper, contained samples of wood pulp and paper.

PERU.

Group 33, Photography, had an exhibit of colored photographs by Vargas Hnos.

PORTUGAL.

In Group 29, Typography and Various Printing

Processes, there were two exhibits of newspapers and lithographic works.

Group 30, Books and Publications and Book Bindings, was represented by four exhibitors showing art and nature in Portugal, and other publications.

Group 31, Maps and Apparatus for Geography, Cosmography and Topography, showed an exhibit by J. E. Cacela de Victoria Pereira of a chart of Portugal in relief.

Group 33, Photography, contained a large number of interesting photographs of every description.

Group 41, Models, Plans and Designs for Public Works, was represented by an exhibit of plans of the Port of Lisbon, photographs, statistics and publications concerning the same port.

Group 42, Architecture, had four exhibits of plans, elevations, drawings of a Palace for Expositions and festivals, etc.

SIAM.

Group 29, Typography and Various Printing Processes, had an exhibit by the Military Survey Department

Group 31, Maps and Apparatus for Geography, Cosmography and Topography, also had an exhibit of maps by The Military Survey Department.

Group 33, Photography, contained an exhibit of autochromes by A. H. Duke of Bankok.

Group 36, Chemical and Pharmacal Arts, had four exhibitors showing dyes, perfumes, hair lotions, resin and various soaps and oils.

SPAIN.

Group 30, Books and Publications and Book Binding, had exhibits of illustrated catalogues and three magazines.

Group 36, Chemical and Pharmacal Arts, had an exhibit by Julio Serrano Estrela of Valencia of insecticides.

Group 37, Musical Instruments, contained two exhibitors of musical instruments.

SWEDEN.

Group 30, Books and Publications and Book Bindings, was represented by exhibits of samples of

books, official maps, a Swedish Encyclopedia in 21 volumes and samples of book binding.

Group 31, Maps and Apparatus for Geography, Cosmography and Topography, showed maps, charts, atlases, relief maps, etc.

Group 32, Manufacture of Paper, had two exhibitors showing samples of paper, statistics, photographs, models of wood-pulp paper machine, etc.

Group 33, Photography, contained three exhibits of photographs.

Group 34, Instruments of Precision, Philosophical Apparatus, etc., Coins and Medals, had exhibits of magnetometers for determining area, depth and extent of magnetic ore deposits, surveying instruments, standard combination gauges, and other instruments.

Group 36, Chemical and Pharmacal Arts, had two exhibitors showing Radium emanation generators, and Recorders for economizing with fuel in boiler plants.

Group 38, Electrical Methods of Communication, was represented by an assortment of telephones, accessories and switchboards.

Group 40, Civil and Military Engineering, contained an exhibit of machines for testing materials.

Group 41, Models, Plans and Designs for Public Works, had five exhibitors showing model of

Uruguay

reinforced-concrete bridge, model of ore-loading docks and ore-carrying steamers at Narvik, topographical relief map of Trollhattan, showing Gota Navigation Canal and Locks, models of hydro-electric power stations, etc.

URUGUAY.

Group 29, Typography and Various Printing Processes, was represented by a display of albums of impressions and monograms.

Group 30, Books and Publications and Book Bindings, had quite a large number of exhibits of books, photographic albums, political publications, bulletins, reviews and reports.

Group 31, Maps and Apparatus for Geography, Cosmography and Topography, had four exhibitors showing maps, mural graphic maps and publications.

Group 33, Photography, was represented by two exhibits of colored views, plates and framed pictures.

Group 34, Instruments of Precision, Philosophical Apparatus, etc., Coins and Medals, had an exhibit by the Bureau of Standard Weights and Measures of Montevideo.

Group 35, Medicine and Surgery, showed surgical instruments and apparatus for veterinary surgery.

Group 36, Chemical and Pharmacal Arts, had a number of interesting displays, such as Paraffine Candles, putty, disinfectants, insecticides, medicines, etc.

Group 39, Electrical Methods of Communication, was represented by photographs and reports of the National Inspection of Wireless Telegraphy of Montevideo.

Group 41, Models, Plans and Designs for Public Works, had map of railways and other maps and photographs.

Group 42, Architecture, had a drawing of completed buildings by the Direction of Architecture of Montevideo.

With the general description of Exhibits in the Department of Liberal Arts, it was almost impossible to cover the various exhibits in detail to enable one to fully appreciate their magnitude, nor were the contemporary features elaborated as much as was possible, which is also true of late improvements made on old inventions and exhibits. It is therefore fitting that a brief general resume be made of those that stood out prominently in the Palace of Liberal Arts.

It was quite evident from the remarks of experts and other authorities that those exhibits of more than passing interest to the general public and scientists, and which made the Department of Liberal Arts the mecca of those seeking further knowledge in the sciences, arts and crafts, were those exhibits that were the least pretentious or spectacular in many cases.

In the Liberal Arts Section of the Palace of Machinery was a late invention of G. F. Pancoast, belonging to the Hearst Publishing Co., which stood out preiminently as the greatest printing press of modern times. It was called the Universal Pancoast Unit Press, built by R. Hoe & Co., a machine that prints eight colors in one run, and demonstrated as a working exhibit throughout

the Exposition period. It was the work of this press to print the color supplements of the Sunday Examiner, distributed on the Pacific Coast. This invention has revolutionized newspaper printing throughout the world, and was the first of its kind ever made.

Another press that attracted no little attention was the Hoag Automatic press, another saver of labor, and a means of facilitating the printing art. This machine would automatically feed, print, deliver and fold on the one run, a most wonderful invention and means of economic production, a contemporary exhibit in every respect.

In the same grouping, used as an office appliance, was a small hand or electric printing machine called the multicolor press. In one turn, or technically speaking one "run", it would print the title of a firm in one color, the address and body of the letter in regular type color and an exact reproduction of the signature of the sender in a third color if desired. This in itself will prove a most effective means of facilitating the work of an office requiring extended correspondence, and will no doubt, prove indispensable to office efficiency.

In this same group was the Gnu copy holder, a new invention used by the typist as an easy means of reading copy to be transcribed, the

copy being set up immediately in front of the typist and directly above the typewriter - - a most convenient and efficient office help. This appliance, of its kind, was the latest and best invention exhibited.

A new invention also in this group was a novel check protecting machine, manufactured by the Peerless Check Protecting Company. This was a little machine that was an improvement over the old ones, inasmuch as it was very simple in mechanism and required less space in an office.

In connection with the typewriters in this group, both of the big Companies -- The Remington and Underwood - - had many inventions used in connection with their typewriters that were not shown at previous Expositions.

Since it was through the many periodicals and trade publications that the Exposition received such splendid advertising, and particularly those exhibits in the Department of Liberal Arts, it is only just that they should have the commendation which they deserve. At all times, as news items and editorially, they opened their pages to printed circulars and all other data and news items, and this helped so materially in securing the interest of exhibitors interested in

the Department of Liberal Arts. Not only did they give publicity to and advertise exhibits at the Exposition but many of them occupied exhibit space themselves and helped in every way towards the success of the Exposition.

Too much cannot be said of the Special Committee on Graphic Arts, Messrs. Edward DeWitt Taylor; George Muller, Secretary of the Public Library of San Francisco; Frank C. Graves, Librarian Mechanics Institute; Paul Elder, of Paul Elder Company and R. C. Ayres, of Johnston Ayres Company, who gave their time, thought, work and energy to the work of interesting exhibitors in these special groups, and contributed so much towards the development of the Graphic Arts Section of the Department of Liberal Arts.

In Group 30 there were some wonderful folding machines of recent invention in the press machinery line; machines that have revolutionized the printing industry.

In the same grouping, under books and publications, one of the volumes that stood out prominently was the new Children's Encyclopedia, or Book of Knowledge. These books would answer the almost impossible questions that children are inclined to ask and gave information on subjects little known to

the average reader; in fact, it would answer almost any question that could be thought of in the sciences, in nature, etc.; why birds and animals do this and that, etc.

Of course in this grouping we cannot overlook the Encyclopedia Britannia, which is known worldwide for its authentic information.

The Paul Elder Company, publishers, of San Francisco, had some unique bindings and publications; in fact these bindings were confined to his own shop and could not be found in any other part of the United States.

Of particular interest and most attractive was his booth exhibit, which was very unique, being made up in the old Gothic architecture, picturing a small chapel effect and improving the tone of his exhibit to no small extent.

In the technical journals, the Hill Publishing Company and the McGraw Publishing Company were perhaps the largest exhibitors of their kind, representing as they do the finest technical journals in this or any other country. The McGraw Company

confined most of its publications to electrical subjects, while the Hill Company had such superior publications as the Engineering and Mining Journal, Engineering News, The Machinist, etc.

Group 31. In this group was the exhibit of the Cahill World Map Company's so-called Butterfly Map, which has made possible wonderful advances in geography, facilitating this work to no small extent, and making it easy for the scientists and geographers to follow out the line of least resistance in geographical subjects. This late invention attracted the attention of the scientific world, which is evidenced from the many testimonials presented in the advertising of this firm.

Another map feature that simplifies the study of geography for school children was the illuminated map exhibited by T. Ikemori, a Japanese. In connection with this illuminated map and as a means of recreation and interest to children he had a game which might be called "parlor hockey". It was the purpose of the inventor to interest the children first by the game. The loser in every game would then be asked questions and made to point out various geographical points, thus proving that play and work together were an effective means of teaching children in the early rudiments of geography, or any other study.

Photography. In group 33, the Eastman Kodak Company stood out as the most attractive and interesting exhibit. Not only for their line of photographic appliances and supplies that they produced, but for the many beautiful pictures exhibited and taken by their kodaks and cameras. A feature of their very exclusive exhibit of photography was a gallery in the second story of their exhibit that was said to surpass anything of the kind ever shown in its lighting effects. Not only did their products receive the highest consideration, but their booth architecture, which was made in the Italian style, also received the highest consideration as an architectural exhibit, being awarded the Gold Medal as the most attractive booth in the Palace of Liberal Arts. The combination effect of the commercial and artistic was the thing that attracted the eye, without any real distinction in the separation of same, which no doubt made this the most attractive exhibit without any ostentatious display.

However, the pictures attracting the greatest attention and receiving the highest consideration from the International Jury of Awards, were those exhibited in the City of New York Building. The

beautiful workmanship and effects of the photographs was what earned for them this highest consideration. The pictures artistically and educationally told a story of the municipal life of the City of New York, illustrating the details and the work of all Departments, as well as the advances made in their playground and settlement work, and work done by public trade schools.

Second to these pictures in point of attraction were those of the New Zealand exhibit, which also received a Grand Prize, the highest consideration given any exhibit. This exhibit showed particularly scenic photography, with some portraits.

The moving picture world was illustrated by machines of the Nicholas Power Company and Precision Machine Company, showing the latest inventions in the models of projecting moving picture machines, thus illustrating to the layman and experts alike the wonderful progress made in this industry, what it has accomplished in perfecting the showing of moving pictures and the millions of dollars invested.

RAL PHOTOGRAPH
ALERY.

The Pictorial Photography Exhibit of the Department of Liberal Arts, which was organized and completed through the individual efforts of this Department, was one of the most difficult pieces of

work in the Department and required no end of preliminary detail work. It was really a Bureau of its own, although an integral part of the Liberal Arts Department. In the beginning, to interest prospective exhibitors many preparations were made, and then came objections from numerous photographers who claimed that the exhibit should be classified not as a part of Liberal Arts but that it belonged to the Department of Fine Arts. In fact, the detail and numerous questions brought up on this subject necessitated so much worry and responsibility, that the Chief of the Department, in order to relieve the pressure and to be sure of satisfying those interested in photography, appointed a special Honorary Advisory Committee, which formed the nucleus of a Committee on Selection of the pictures submitted. The final Committee on Selection consisted of: Mrs. Anne Brigman
Mr. Francis Bruguiere
Mr. Fayette J. Clute
Mr. W. E. Dassonville
Mr. E. N. Sewell
Mr. Will Sparks
Mr. H. C. Tibbitts

Mr. Sparks withdrew before this Committee commenced activities. In order to begin work the first step was the erection of a special booth for the purpose of exhibiting the pictures. This cost approximately $800, which included lights, fixtures, burlap, matting,

etc., and the dimensions of this booth were about 10 ft. wide and 70 ft. long. But it was found that this was hardly large enough to accommodate all the pictures. A little over three hundred pictures were sent from all portions of the United States, but only half were finally accepted and hung. That there be no disappointment and to get the exhibitors to show their good faith and display their pictures, the following communication was sent, which is explanatory of the plan adopted in hanging the pictures:

"December 1, 1914.

Gentlemen:

I am happy to inform you that a special booth or gallery, for the display of Pictorial Photography, is now assured in the Palace of Liberal Arts.

Please, therefore, advise me BEFORE DECEMBER 15 whether you still desire to exhibit your photographs in this class. If so, state the exact number, with size (unframed) of each photograph that you wish to submit for consideration of the Committee on Selection. For the sake both of economy to you and readier handling by us, we prefer all these photographs to be expressed (charges prepaid) WITHOUT frames. The Committee can then have the accepted photographs suitably framed here, with glass.

A flat charge of Two Dollars will be made by this Department for EACH photograph exhibited (large or small), to cover the cost of framing, glass, hanging, and maintenance. This remittance should be sent at the same time the photographs are forwarded, and be made payable to the "Panama-Pacific International Exposition". A refund of Two Dollars will be made for

each photograph that is not accepted.

If exhibitors are especially desirous of sending their photographs already framed, they may do so and, if acceptable, these will be hung as received, for which a flat charge of One Dollar per photograph will be made.

Please do not forward your Photographs until you receive further notice from this Department as to just HOW, WHEN and WHERE to send them. I expect to give you these and other particulars shortly after the middle of December, so that you can have your photographs ready to forward early in January 1915. It will, therefore, be advisable for you to commence preparing them without delay.

No names, addresses, or titles will be permitted on the face of the Photographs displayed. This Department will place upon each Photograph a number by which it can be readily identified in the catalogue. The title of the Photograph, with the exhibitor's name and address, should be plainly marked on the back of each photograph when forwarded.

All photographs displayed must be covered with glass to prevent possible defacement or other damage.

Meanwhile, kindly let me know as soon as possible whether I may surely count upon you to enter an exhibit, and if so, exactly how many photographs you wish to submit, with the precise dimensions and character of each. Awaiting your reply, and assuring you of my heartiest cooperation, I remain,

Very truly yours,

(Signed) Theodore Hardee

Chief of Liberal Arts".

Mrs. Anne Brigman's studies of San Francisco received the highest consideration, winning the Grand Prize for her pictures. These studies were

in most cases scenic photographs, illustrating by feminine figures the various moods and expressions of nature. Bianca Conti's pictures depicted fine portraits of children, mothers, etc., winning the Second Highest Award. There were many others in the gallery that received special consideration for the various expressions of photography, but none compared with those of Mrs. Brigman and Bianca Conti.

Group 34. Instruments of Precision, Philosophical Apparatus, etc. There were exhibited some very late inventions in the scale line, by the Anglide Computing Scale Company and the Toledo Scale Company, attracting a great deal of attention from people interested in these subjects. As a commercial line of scales, this represented the highest efficiency in this art, making it possible for the tradesman to compute his receipts and profits without the need of bookkeeping, thus facilitating and revolutionizing the work in this industry.

In this grouping there were many new inventions, fully developed and partially developed, that received the highest consideration from scientific men throughout the country, and in fact no little attention

from the layman. For instance, the Bristol Company of Waterbury, Conn., who specialized in temperature recorders, meterological instruments, speed recorders, etc. They had an exhibit of the most varied and complete line of instruments of this character, considered the largest and best of its kind ever shown at any Exposition. It showed the wonderful possibilities reached in scientific instruments for the medical profession and scientists.

One wonderful exhibit was the radial planimeter exhibited by Professor William F. Durand, of Stanford, California, a new invention for the purpose of determining the activities of tide waters, being a great improvement over all former instruments made for this purpose. This attracted a great deal of attention and although a small exhibit, proved one of the most interesting ones.

In this same group was another late invention, a machine used for determining the vicosity of liquids. This invention proved its wonderful advancement over all other instruments of like nature and was exhibited in the Government Section, Bureau of Standards, as a compliment to the inventor, McMichael of Seattle. Although small in its construction, this

machine has completely revolutionized the means of determining the viscosity of liquids and no doubt will be taken up by large corporations in need of such instruments.

Perhaps the latest patents in field engineering instruments were exhibited by the Bausch & Lomb Optical Company of Rochester, N. Y. In former years it seems that higher consideration has been given to other firms manufacturing the same products, but of late years the Bausch & Lomb Optical Company have so far advanced in the technical features of this line that it was given the highest consideration, winning the Grand Prize at this Exposition.

Particularly interesting were the exhibits of W. & L. E. Gurley, who showed a complete line of standard weights and measures and hydraulic instruments, their line of the latter surpassing all others, manufactured by any company in the United States, in fact, in the entire world.

Machines manufactured by the Taylor Instrument Company of Rochester, N. Y., although not made as a special exhibit, were utilized in all the various Departments of the Government and showed wonderful strides made by this company in scientific instruments,

as also did the testing machines of the Tinius Olsen Testing Machine Company, who had a complete line of testing machines used for every purpose of steel and iron testing.

The Farran Zerbe collection of coins and medals was an exhibit that to those interested was the greatest of its kind ever exhibited at any Exposition, showing legal tender from the time of 776 B.C. to the present day. One coin used by one of the foreign countries, valued at $1 and stamped in the official seal of the country, weighed 18 pounds, while another coin of equal value was about twice the size of a pinhead, showing the extremes of coin production. This concern had charge of the sales of the official souvenir coins of the Exposition.

In groups 35 and 36, Medicine and Surgery, and Chemical and Pharmacal Arts, in the Department of Liberal Arts, there were many new products and many new machines for manufacturing these products that were of interest to professional men perhaps more than to the layman.

Perhaps one of the most contemporaneous exhibits in this group was that of the Columbus Dental Manufacturing Company, and also that of the Dentists Supply Company of New York, exhibiting the advances made in artificial teeth, thus proving that it will be only

a matter of a short time when it will be almost impossible for anyone to detect the difference between real and artificial teeth.

The X-Ray apparatus exhibited by the Scheidel-Western X-Ray Coil Company of Chicago, and the Campbell Electric Company of Lynn, Mass., were two exhibits that attracted no little attention and demonstrated the advance made in this industry and which have proved a wonderful aid in the advance of surgical knowledge.

Related to artificial limbs were foot appliances, showing every device for the relief of foot troubles, exhibiting products that very few people realized existed, but which are proving a necessity to people who have almost forgotten the art of walking. In fact, it was claimed by these exhibitors that many body ailments began with the feet and the only means of curing same was by using feet appliances.

Another exhibit that attracted no little attention from the people who viewed the Exposition was an exhibit of fireless fireworks by Walter D'Arcy Ryan, who demonstrated the effectiveness of indirect lighting on the buildings of the Exposition, also the beautiful night effects, and wonderful tones, through projecting different colors by glass lenses on steam. His wonderful

battery of varied colored electric lights in its elaborateness and wonderful possibilities of display gave rise to the name of "fireless fireworks".

CY HOSPITAL. In this same connection, and classified in Groups 35 and 36 of the Department of Liberal Arts, was the Exposition Hospital, the existence of which, with but very little expense to the Exposition, was made possible by this Department. In fact it was through the efforts of the Department that the Exposition Hospital was partly equipped, such parts being represented as working exhibits in the Department. As a means of better understanding the conditions by and exhibits with which the Hospital was equipped, and the reason for the interest manifested by firms invited to participate, we submit herewith a copy of communication sent out on June 27, 1913, which was as follows:

"June 27, 1913.

Sent to Hospital supply and equipment manufacturers in United States:

The construction of the buildings of the Panama-Pacific International Exposition is now well under way, and the emergency hospital on the Exposition Grounds is already completed. This hospital has six small wards with accommodations for about twenty-five patients. It is also provided with a waiting room, receiving and diagnosing room, doctors' dressing room, and rooms for medical treatment, anaesthesia and minor surgery, operating,

sterilizing, instruments, X-Ray apparatus, kitchen, dining and nurses' room, etc. This will make a very complete hospital, as per diagram accompanying this communication.

It is the purpose to make the Exposition Hospital a WORKING EXHIBIT. The National Government has shown its interest in the matter by detailing an officer of the United States Public Health Service to take charge of the Exposition Hospital. Offers have already been received from a number of firms either to donate or loan articles of equipment manufactured by them for use in this hospital. It is the intention to permit on the wall in each room a neat tablet or placard containing the name, business and address of the exhibitors, who would also be mentioned in the Official Catalogue of the Exposition. Nearly ten thousand men are now at work on the Grounds, which number will soon be doubled. By the time the work reaches its maximum stage there will be probably eighteen thousand employed. It is therefore the purpose of the Exposition officials to open this hospital as soon as possible.

There will be very many visitors to this hospital during the pre-Exposition period, and after the Exposition is formally opened there will be a great many more. Undoubtedly the national medical organizations, including the American Medical Association, will hold their annual meetings in San Francisco during the Exposition year. A large majority of the physicians, surgeons, pharmacists, nurses and others interested in hospital work, who attend these meetings, will naturally visit and inspect the Exposition Hospital.

It is believed that by exhibiting articles of equipment in actual use in a practical hospital of this character, they will be brought to the attention of those interested in a more satisfactory way than ny the mere display of such articles in the "Medical and Surgical" group of the Palace of Liberal Arts where they must otherwise be exhibited under the rules of the Exposition governing the classification of exhibits. In other words, the Exposition Hospital can be made supplemental to the other displays by manufacturers, and may by special arrangement be subject to review by the International Jury of Awards.

Opportunity is accordingly offered for consideration of this subject. We believe that it will be to your interest to participate in this work, because you would thereby not only avoid the expense of installing and maintaining an exhibit in the Palace of Liberal Arts, but you would also be enabled to display your products to far greater advantage. You are therefore invited to communicate with the Chief of this Department and state what articles can be furnished by you and under what conditions.

Yours very truly,

(Signed) Theodore Hardee

Chief of Liberal Arts".

The working exhibits in the Exposition were as follows:

Firm.	Article.
American Sterilizer Co.,	Sterilizers
D. Appleton & Co.,	Medical Books
Bausch & Lomb	Laboratory Equipment
F. Bissell Company	Vacuum Cleaner
P. Blakiston's Sons & Co.	Medical Books
Geo. W. Brady & Co.,	X-Ray plates
Cadillac Motor Car Co.	Automobile Ambulance
F. A. Davis Company	Medical Books
Draeger Oxygen Apparatus Co.	Pulmotor
Funk & Wagnalls Co.	Medical Books
Hart & Hutchinson Co.	Steel Lockers
H. W. Johns-Mansville Co.	Electric Light Fixtures
Johnson & Johnson	Ligatures and adhesive plaster
Lea & Febiger	Medical Books
Lincoln Rubber Company	Rubber Gloves
J. P. Lippincott Co.	Medical Books
Meinecke & Co.	Beds and hospital sundries
Monument Mills	Counterpanes
C. V. Mosby	Medical Books
Ohio Chemical & Manfg. Co.	Anaesthetic Apparatus

Parker, Wilder & Co.,	Sheet and pillow cases
Powers, Weightman, Rosengarten Company	Drugs and chemicals
Rebman Company	Medical Books
Rucker-Fuller Desk Co.,	Office and library furniture
W. B. Saunders Company	Medical Books
Scheidel-Western X-Ray Coil Company	X-Ray apparatus and Coolidge tube
Singer Sewing Machine Co.	Sewing Machine
Victor Electric Co.	Electric apparatus
Watson Mantel & Tile Co.	Tiling
Wm. Wood & Company	Medical Books.

ORGAN IN FESTIVAL HALL.

One of the most important features in connection with the musical group of the Department, was the securing of an organ for Festival Hall, something large enough yet not too bulky that could be utilized for all the musical programs during the life of the Exposition and later to be installed in the Exposition Auditorium. Special committees of Selection were appointed and did yeoman service in securing data, making all preliminary arrangements, and consulting leading organ manufacturers of this and foreign countries. Their work was particularly arduous for the reason that this organ was not only to be installed in Festival Hall for use during the Exposition period but it was to be presented to the City of San Francisco and permanently located in the Exposition Auditorium at the Civic Center when the Exposition closed.

After working on the subject and going

over all the suggestions, plans and bids that it was possible to secure, the Committee finally recommended to the Exposition management that the Austin Pipe Organ be installed by the Austin Organ Company of Hartford, Conn., U. S. A.

As a consequence of this decision being upheld by the Exposition Management, the Liberal Arts Department, under whose jurisdiction the Committee labored, sent out on February 28, 1914, the following letter to the firms mentioned who had been interested in the installation of an organ, which is self-explanatory:

"February 28, 1914.

To:
M. P. Moller, Hagerstown, Md.
Casavant Bros., South Haven, Michigan.
Frank T. Milner, C/o W.W.Kimball Co., Chicago, Ill.
Murray M. Harris Co., Los Angeles, Cal.
A. B. Felgemaker Organ Co., Erie, Pa.
Hirsching Organ Co., Salem, Ohio.
The Ernest M. Skinner Co., Boston, Mass.
Will A. Watkin Co., Dallas, Texas.
Felix F. Schoenstein & Son, 2306 Bryant St., San Francis.
Hook & Hastings Co., Kendal Green, Mass.
Estey Organ Co., Brattleboro, Vermont.
Hutchings Organ Co., Boston, Mass.

Gentlemen:

I beg to advise you that after careful consideration and investigation the Exposition management awarded a contract to the Austin Organ Company of Hartford, Connecticut, to furnish and install the pipe-organ desired for Festival Hall on the Exposition Grounds here in 1915.

This instrument will consist of Great, Swell, Solo, Choir, Echo and Pedal organs, comprising 113 stops and four Consoles; height 77 feet, length 4[illegible] feet, depth 27 feet; operated by thirty-five horse-power motor.

At the conclusion of the Exposition this organ will be installed in the million dollar Auditorium of the "Civic Center" which forms the group of new Municipal buildings here. This Auditorium is being erected by the Exposition management to house the Congresses and Conventions which will be a part of the activities of the Exposition next year. The building, including the organ, will be presented to the city of San Francisco as a permanent memorial of the Panama-Pacific International Exposition.

In conveying this information to you I wish to express this Department's high appreciation of the very generous and public-spirited manner in which you responded to our request for suggestions as to the most suitable character and size of organ to install. I understand that the several committees having the selection in charge were materially aided by the data which you so kindly and promptly furnished through this office.

Again thanking you for your courtesy and hoping that you will honor the Exposition with a visit next year and see for yourselves the result of our conclusions, I remain,

Very truly yours,

(Signed) Theodore Hardee

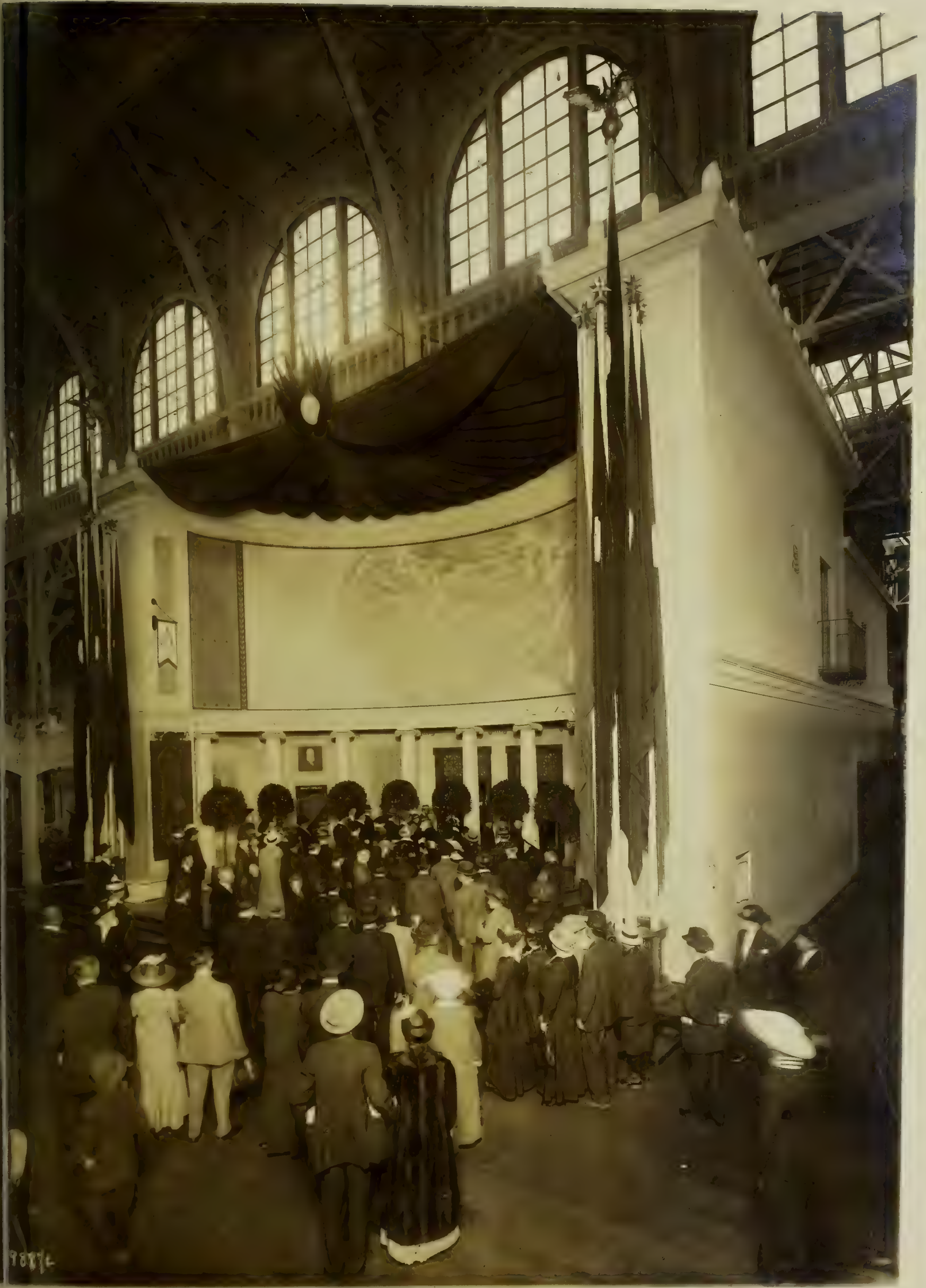
Chief of Liberal Arts.

The musical instruments that showed the greatest advance in new inventions were those of the talking machines in the Department. Principal among these showing the great development made in this line, were the Edison, Sonora and Cheney talking machines.

The Edison demonstrated the efficiency of playing the records with a Diamond disc. It was claimed by the Sonora people that their instrument had a higher tone value than any other of the instruments shown in the Department. This claim was disputed by the Cheney instrument. The Sonora phonographs, although perhaps not architecturally as beautiful as the others, received exceptionally high consideration from the experts for its tone value qualities. The Cheney talking machine was made entirely different from the others architecturally and possessed particular merit in its decorative features. The beauty of this particular machine in mahogony finish was not excelled by anything of the kind ever shown in the same line. What made the Edison talking machine most effective and attracted more than ordinary attention to its tone qualities was the fact that it was demonstrated with the aid of a large pipe organ in the Millers' Auditorium. The Edison also claimed superiority in tone value over any other instrument, although this product was not installed in time to compete with the others. The most attractive and largest exhibits,

however, were made by the Victor Talking Machine Company and the Columbia Graphophone Company. The Victor Company had a very beautiful auditorium in the center of the building that proved a most fascinating spot to music lovers and a better means of demonstrating talking machines than any other musical exhibit. The finest educational feature, however, in talking machines was demonstrated by the Columbia Graphophone Company. This company had a daily program of records played in the various languages, thus proving one of the most effective means of teaching the different languages by the method of correct pronunciation and accent was through talking machines.

Another musical instrument that demonstrated the qualities of combining two instruments was that of the Mills Novelty Company - - an instrument called the Violano-Virtuoso, or a combination of a violin and piano playing together automatically. This same instrument was exhibited at the Alaska-Yukon Exposition and was designated by the United States Government as being the eighth wonder of the world. The qualities of the violin were brought out as nearly perfect as that played by hand.



Crowd Waiting to Hear Long Distance Telephone,
New York to San Francisco

Another interesting exhibit in connection with this group was that of the Masteroll Perforating Company showing the manufacture of music rolls for player-pianos. There were many compositions made on these rolls by various people interested in the subject and used for demonstrating purposes; for example, anyone with an original piece of music was allowed to play the piano with a blank roll of paper attached and as he would play each key would automatically perforate and register the tone as the piece advanced. After finishing the composition, the roll of paper was taken from the Masteroll player or perforator, transferred to a regular player-piano and reproduced by the machine exactly as composed. This exhibit attracted attention at all times and proved one of the most attractive and interesting in the Eilers' collective exhibit.

ISTANCE
HONING.

In Group 39, perhaps the most interesting and attractive exhibit in not only this group but in the entire Department, was that of the American Telephone and Telegraph Company's long distance telephone demonstration, from San Francisco to New York. This of all the exhibits in Liberal Arts was perhaps better known and better advertised through its wonderful demonstration and

possibilities than any other exhibit. The architectural attractiveness of the exhibit was also most beautiful. On the front outside was a large map showing the many telephone lines of the American Telephone and Telegraph Company throughout the entire United States, demonstrating by small electric lamps, which being started in the central office in New York extended over all the wires in the various parts of the United States and Canada. Inside the exhibit there was a stage and seating for at least 190 people. There was a daily program of four shows, beginning with a moving picture story illustrating their giant industry in all its various Departments and ending with the principal events connected with this wonderful achievement of 1915. The commercial and economic possibilities of this wonderful achievement of telephony was perhaps by far the greatest feature of the entire Exposition. It can best be judged by a description given by one of the Exposition's most prominent guests, who talked over the longest of long-distance telephones at the exhibit in the Liberal Arts Department, who said:

> "I thought I had gotten over wondering at the miracle of the telephone, but what I have just done amazes me as much as the first words I heard over

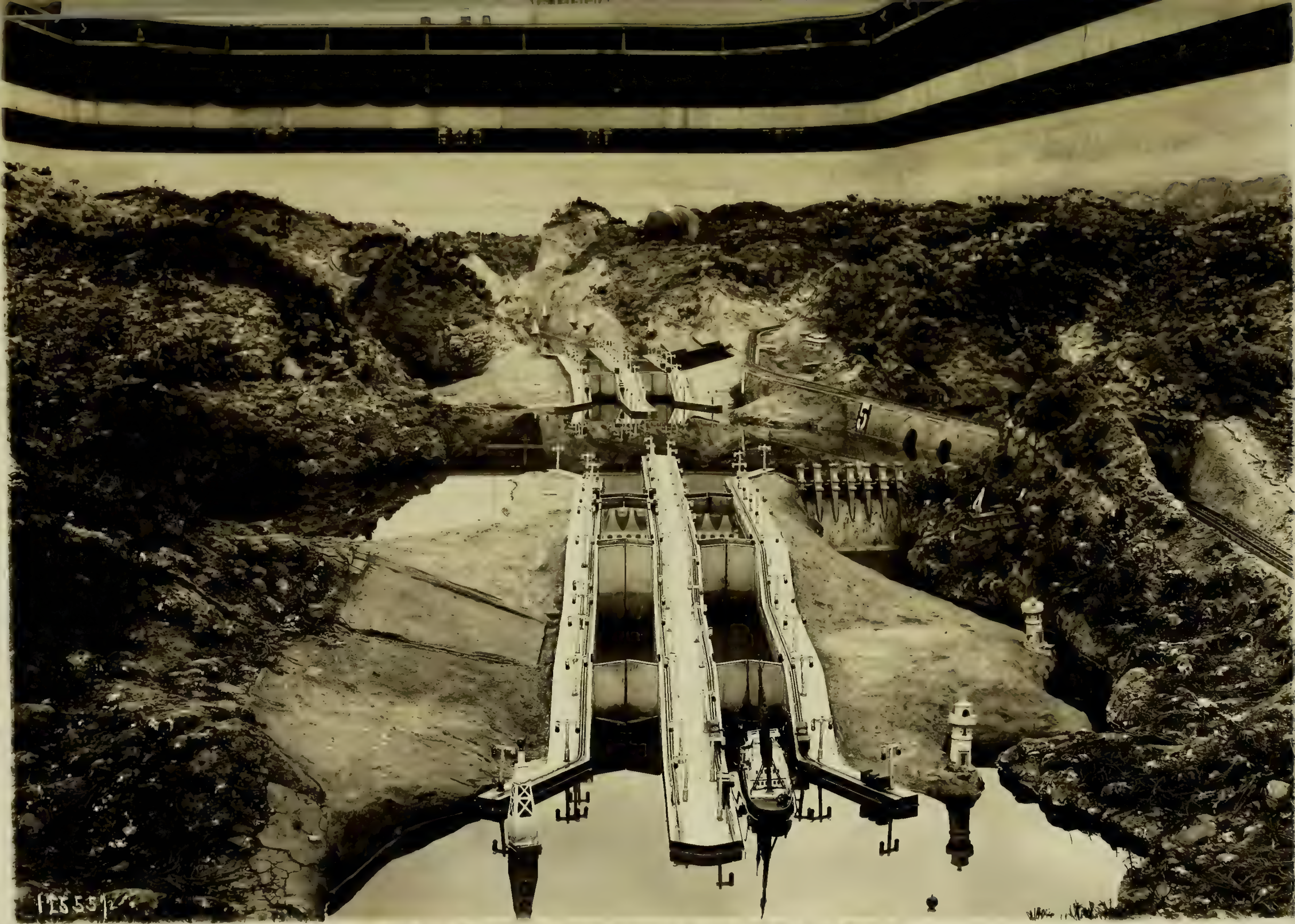
> the wires many years ago. Even now I can hardly conceive that it is possible. I have talked over long distances many a time before, but this is far beyond the limit. Chicago I am used to, even Denver; but this talking from the Atlantic to the Pacific gives one a thrill. It appeals to the imagination - - it is a theme for poets.
>
> What it means to the country, it is impossible to estimate. For one thing, it is a final blow to sectionalism - - it has put a seal on the fact that there is no longer East and West, North and South. Not even the railroads or the new canal have done or can do so much toward bringing the States closer together and uniting them more firmly, not only in commerce, but in thought and language. Provincialism will become rarer and rarer, localisms, dialects - - all such things that depend on isolation - - are getting to be an impossibility in the United States and the telephone has been the greatest agent in bring about this desirable condition. It is hard for people to get very far apart when they are in constant touch with each other, and I know of nothing which is doing more to strengthen the bonds between individuals than the network of wires the American Telephone and Telegraph Company is spreading over the country. So important is this idea that -- extreme as the statement may seem - - I believe quite firmly that, had the telephone system reached its present perfection previous to 1861, the Civil War would not have occurred. The wires would not have let the North and South drift so far apart".

The wonderful effect on the mind and the wonder of this accomplishment could only be appreciated by hearing the human voice from New York. The Company gave four demonstrations a day entitling anyone in the audience to hear the conversation. The usual performance carried on was that someone selected from the audience would go up on the stage,calling up the City of New York. After receiving the other end a conversation would

follow along general lines, the party at the other end asking the party here on the stage if he or she wanted to talk to any certain party and deliver any particular message. At each seat was connected two receivers for the benefit of the audience. The conversation would begin by the demonstrator at the other end giving a short history of the American Telephone and Telegraph Company or similar subject and then finish by explaining how it finally brought about the greatest of all modern achievements of talking to New York from San Francisco by telephone. The voice could be heard as clear as if you were talking to someone across the street.

In this same group there were some other wonderful inventions that proved that the advancement of electrical development was greater than in any other industry. For instance, the American Telegraphone, which was said by experts and authorities to be one of the greatest modern inventions and made possible automatically the receiving and recording of a telephone message by any business man no matter whether he was in his office or absent from same.

The General Acoustics Company's intercon-versing system from one office room or Department to



Model Panama Canal and Moving Platform

another was one of the wonderful modern inventions exhibited. The detective dictaphone, another instrument which made possible the securing of evidence; has been explained in the group in which it was included.

The wonderful advance also made in hearing devices was demonstrated by exhibits in this grouping and were features that caused no end of commendable criticism from the experts for methods of communication, and proved that it will only be a matter of a short time that no matter how deaf a person may be except their ear drum is actually shattered, they will be able to hear by these instruments.

CANAL. An exhibit that stood for so much in the advancement of electrical and engineering lines was that of the Panama Canal Exhibition Company with a working exhibit on the Zone. This exhibit which stood for so much as represented in the Exposition, and symbolic of the very foundation upon which the Exposition was built, was perhaps the most wonderful piece of work, both from a model engineering and from an electrical standpoint, that was ever demonstrated at any Exposition. The extent and the wonder of this exhibit has been told so many times that it is not necessary to give any details here. A better idea can

be conveyed perhaps through the expression of General Goethals, the Builder of the Panama Canal, who said

> "I would advise all of you who are interested in the Panama Canal to see the very perfect reproduction that you have at this Exposition".

also the expression of Vice-President Marshall:

> "Every man, woman and child in America should see this reproduction of the Panama Canal".

Another exhibit that proved most attractive, a model of which was made for the United States Government, was the Panama Canal relief map exhibited by the United States Government. This model carried out in every detail the wonder of this mighty undertaking.

In group 43, Architecture, there was very little demonstrated in this particular group perhaps for the reason that it was almost impossible to compare any work with the wonderful architecture of the Exposition itself, which was really a part and exhibited in the classification of the Department of Liberal Arts and judged by its Jury. What has been said of the wonderful beauty, the lines, and the effect, of both the ancient and modern architecture carried out in the various groups of the Exposition is that there has

never been anything equal to it built at any previous Exposition or any place in the world of architecture. There has been so much favorable mention from so many prominent and expert critics that anything we could say would be weak in comparison.

JURY OF AWARDS

The next event which occupied the attention of the Department and created the keenest interest, perhaps, among the exhibitors, was the preparatory work for the International Jury of Awards, which was to judge the exhibits. To prepare the exhibitors the following notices were sent:

"Attached herewith please find Questionnaire in duplicate to be filled out according to directions. We respectfully request that you fill this out at the earliest possible moment in order that we may present it to the Jury which convenes May 3, 1915.

"If this list of questions does not cover your exhibits, or is not fully explanatory, we recommend that you write this office immediately. Should there be any questions that will necessitate more room to answer, you are of course privileged to supplement descriptions on your own stationery to be attached to Questionnaire.

"If you have products in other groups to be decided by another Jury, we will submit more Questionnaires accordingly, but be sure that you make out all answers to questions in duplicate and return both to this office.

Very truly yours,

(Signed) Theodore Hardee

Chief of Liberal Arts".

The following letter was sent out to relieve the exhibitors of some of the work connected with filling in the blanks on the Questionnaires:

"For your information regarding the filling of Questionnaires, you need not fill out blanks at top of Questionnaire regarding Department, Group, Class, Building and Section. We will do that here. Article 49 referred to in Questionnaire reads, as follows:

> An exhibit shall receive only
> one award in any Group.

"The word Group means the classification under which your article is to be judged.

"These Questionnaires must be in my hands, duly filled in and signed, before April 25, as the Jury meets on May 3. I trust, therefore, that you will give this very important matter your best attention.

Yours very truly,

(Signed) Theodore Hardee

Chief of Liberal Arts."

The following letter was sent to local representatives of Eastern concerns, so that if they were so authorized, they could fill out the Questionnaires:

"That you may know of the Jury activities and what your firm is required to do, we are attaching herewith a duplicate copy of the Questionnaire which has been forwarded to your home office.

"Should you be authorized and wish to fill out the questions submitted, we would be very glad to have you do so. This would be the means of aiding us very materially and facilitating the work, as we are rushed for time and must have the Questionnaire returned before April 30.

"The Group Jury begins its work on May 3, and is limited to the 21st day of May. On May 23 the Departmental Jury convenes, and on June 3 the Superior Jury is scheduled to begin its work.

Very truly yours,

(Signed) Theodore Hardee

Chief of Liberal Arts".

TION-
BLANKS

Questionnaire blanks, in duplicate, on which the exhibitors were to submit information regarding their exhibits for the attention of the Jurors were sent out. On the information given on these Questionnaires depended to a great extent the judging for awards. A copy of same, in duplicate, will be found in Folio.

The active work of the different Groups of the International Jury began on May 3, 1915, in the Department of Liberal Arts and ended May 28, 1915.

ECTION
JURY

Perhaps that which required the most time and very careful consideration was the selection of the Jurors as represented by the different industries and sciences in the Department. This work necessitated no end of investigation and serious consideration, it naturally being absolutely necessary to secure the best men of the kind to be had in both the United States and Foreign countries. It required many months to consider the volunteer applications for Jurors' positions, and of the many names which were submitted numerous ones were rejected. Some could not come because of little time; others because they request monetary compensation other than their regular expenses. In order to find out

from those who had been selected whether they could be depended upon, the Department sent out the following communication:

"Your name has been suggested to me for consideration as a member of the Group Jury covering exhibits in Group (number and title) of the Official Classification of exhibits for the Department of Liberal Arts at this Exposition.

"The work of the Group Juries will begin May 3, 1915, and must be completed within twenty days. The Department Juries will meet on or about May 28 and the Superior Jury will meet on or about June 3, 1915.

"For your information I beg to state that Jurors representing Foreign exhibitors will receive no compensation from the Exposition nor any allowance for expenses. Jurors representing Domestic exhibitors and resident within a radius of thirty miles from San Francisco will be allowed no per diem, nor traveling expenses. All other Domestic Jurors will be refunded their actual railroad fare on ordinary express trains upon a round trip ticket basis, together with charge for lower Pullman berth, and in addition they will be allowed $5 per day for subsistence and gratuities while traveling in direct line to San Francisco; they will be allowed an additional $5 per diem for each day their services are required and employed in Jury duty.

"Please do not construe this letter as a tender of the position of Juror. The purpose of this communication is simply to ascertain whether or not your services would be available should the President of the Exposition desire to appoint you a member of the Jury.

"If you are selected, you will be promptly notified and supplied with all literature and information concerning the duties of Juror. I am, meanwhile, enclosing a copy of the Catalogue covering the various exhibit Groups in this Department.

Liberal Arts Group Jurors

"Kindly, therefore, let me know without delay whether you will permit me to submit your name for consideration as a Juror on the lines above designated.

Very truly yours,

(Signed) Theodore Hardee

Chief of Liberal Arts".

The following named gentlemen were finally decided upon, and invited and appointed by President Charles C. Moore of the Panama-Pacific International Exposition to act as Jurors on the Groups designated:

NAMES AND ADDRESSES OF JURORS REPRESENTATED IN THE DIFFERENT GROUPS

29-32
rors)

M. L. Davidson, President of the Western Lithography Company of Los Angeles, Los Angeles, California. (Hotel St. Francis, San Francisco, Cal.)

Edward deWitt Taylor, President of the firm of Taylor, Nash & Taylor, San Francisco, California. (404 Mission Street)

Ralph W. Stone, ph. B. A. M., United States Geological Survey, Washington, D. C. Member National Geographic Society, Fellow Geographic Society of America, Geographic Society of Washington. (#17 Euclid Apts., Berkeley, Cal.)

William D. Armes, Associate Professor of American Literature, University of California. Faculty Club, Berkeley, Cal.

Argentine-S. Positano. #1932A Hyde Street, San Francisco, Cal.
Japan-Ki Satow. Dallas Apts., 1144 Larkin St., San Francisco.
Uruguay-Samuel Lezinsky. #154 Sutter St., San Francisco, Cal.

NOTE: For the purpose of getting expert opinion on the various paper products to be judged by this Group, Cutler Bonestell was called upon to assist.

#33.
rors)

Anthony L. Noriega, President Moving Picture Projecting Machine Operators, #63 Haight St., San Francisco, Calif.

S. L. Stein, Photographer, Member of St. Louis Jury, Wisconsin St., Milwaukee, Wisconsin.

Dr. Percy Neyman, President California Camera Club, Commercial Club, San Francisco, Calif.

William Hartman, Secretary Photographic Dealers Association of America, #223 East 37th St., Brooklyn, N. Y.

George Habenicht, #130 Geary St., San Francisco, Calif.

H. Pierre Smith, #1117 Geary St., San Francisco, Calif.

Italy - Luis Mastropasqua, Italian Commissioner, Exposition,
China - P. [illegible] Tang, Chinese Commissioner, #2546 Atherton
St., Berkeley, Calif.
Netherlands - Hans Ledeboer, Netherlands Commissioner,
#3914 Lusk Street, Oakland, Calif.
Japan - J. Harada, Japanese Commissioner, #3653 Jackson
St. San Francisco, Calif.
Argentina - G. [illegible] Loch, Argentine Commissioner, Exposition,
Portugal - J. Bettencourt, (Dr. J. de Sousa) #251 Kearny
St., San Francisco, Calif.

34
rs)

L. A. Fischer, Bureau of Standards, National Conference on weights and measures, employed by Government; Washington, D. C.

Prof. C. A. Kofoid, Member American Miscroscopical Society; University of California, Berkeley, Calif.

Lieut. F. J. Cleary, United States Navy; Mare Island Navy Yard, Vallejo, Calif.

Phillip Fox, Secretary of the Astrophysical Society of America, Evanston, Illinois.

Japan - Shoji Konishi, Japanese Commission, Exposition
China - C. T. Hsia, Chinese Commission, Exposition
Italy - V. Catastini, Italian Commission, Exposition

35-36
urors)

Professor Edmund O'Neill, University of California, Department of Chemistry, Berkeley, Cal. #[illegible]522 College Avenue, Berkeley, California.

Dr. Wm. R. Orndorff, Professor of Organic Chemistry, Cornell University. Ithica, New York.

Dr. Adolph Bernhardt Baer, Dentistry and Medicine and Surgery. #177 Post Street, San Francisco, California.

Wm. Bodemann, Prescription Pharmacist and Druggist. Served on like jury in Department of Liberal Arts at St. Louis Exposition. #5018 Lake Park Avenue, Chicago, Ill.

Dr. Albert Schneider, California College of Pharmacy. #723 Pacific Building, San Francisco, California.

Dr. Hugo Lieber, German Exhibits, St. Francis Hotel, San Francisco, California.

Netherlands - E. deKruyff, Netherlands Commission, Exposition Grounds.

China - M. Q. Fong, Republic Drug Company, San Francisco, Cal.

37-38
urors)

Geo. W. Stewart, Director of Music, Panama-Pacific International Exposition. #2512 Filbert Street, San Francisco, California.

Henry Dreher, Dreher & Sons, Organ Manufacturers of Cleveland, Ohio. #1028 Euclid Avenue, Cleveland, Ohio.

Carl Hein, Director of New York College of Music, New York City, New York.

Adolph Rosenbecker, Director of San Francisco Orchestrs. #436 North C Street, San Mateo, California.

Netherlands - S. H. Van Geuns, #[illegible]68 Market St., San
(Netherlands Commission) Francisco, Cal.
Italy - Ettore Patrizi, #1268 Eight Ave., San Francisco, Cal.

39.
rs)

A. H. Holloran, Vice-President and Managing Editor of the Journal of Electric Power and Gas; #618 Mission Street, San Francisco, California.

Frank Wolff, A. B., Ph. D., Assistant Physicist, Bureau of Standards, Washington, D. C. Government Exhibit Board, Exposition Grounds.

Charles A. Rolfe, President Southwestern Home Telephone Company, Redlands, California.

Chairman - T. D'A. Ryan
Joint Jury: Vice-Chairman: Vito Catastini
Secretary: A. H. Holloran

NOTE: It was decided by four different Departments, affected by electrical exhibits, that the Electrical Jury represented in each Department should combine into one, and act as a unit, judging electrical exhibits in all Departments. They met in the Palace of Varied Industries where they appointed a Chairman, Vice-Chairman and Secretary. However, to represent the Electrical Jury when it was time to go up to the Department and Superior Juries, the Electrical Group Jury retained their idenity in this Department, as shown in Group #39.

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A. H. Markwart, Assistant Director of Works, Panama-Pacific International Exposition, Service Building.

Wm. B. Faville, Bliss & Faville, of the Architectural Institute of America, Balboa Building, San Francisco, Calif.

Morris O. Eldridge, Government Exhibit, Division of Works, Service Building, Exposition Grounds.

Argentina: B. Positano, Argentine Commission, San Francisco.
Japan: A. Furukashi, Japanese Commission, Exposition.
Portugal: J. Bettencourt, #251 Kearny St. San Francisco,Cal

NOTE: Although Morris O. Eldridge, Government Exhibit, did not serve at any time as a member of the Jury, being unable to give time to same, the work was completed by the other members of this Group.

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Rather than give a detailed description of the activities, we are quoting verbatim the minutes of each meeting, thus giving a more correct and specific account of their duties.

FIRST MEETING OF JURORS IN COMMITTEE OF LIBERAL ARTS

10:00 A. M. Monday, May 3, 1915

In Jury Room, Liberal Arts Palace

Meeting called to order by Mr. Theodore Hardee, Chief of the Department, Temporary Chairman.

The following members were present:

Group 29-30-31-32: M. L. Davidson, Edward deWitt Taylor, Ralph W. Stone, William D. Armes and Ki Sato.

Group 33: Anthony L. Noriega, S. L. Stein, Dr. Percy Keymann, Wm. Hartman, H. Pierre Smith, A. Colosanti, Y. C. Yang, Hans Ledeboer, J. Harada and J. Bettencourt.

Group 34: L. A. Fisher, C. A. Kofoid, F. J. Cleary, Phillip Fox, C. T. Hsia and V. Catastini.

Group 35-36: Edmund O'Neill, Dr. Wm. R. Orndorff, Dr. Adolph Bernhardt Baer, Wm. Bodeman, Dr. Albert Schneider, E. deKruff and M. Q. Fong.

Group 37-38: Geo. W. Stewart, Henry Dreher, Carl Hein, Adolph Rosenbecker and S. H. vanGeuns.

Group 39: A. H. Holloran, Frank Wolff, Charles A. Rolfe and V. Catastini.

Group 40-41-42-43: A. H. Markwart, Wm. B. Faville, and J. Bettencourt.

The following address was then given by Mr. Theodore

Hardee, Chief of the Department:

"Members of the International Jury on Awards:

"Permit me to extend a hearty welvome to you, and at the same time to express my deep appreciation of the great honor it is my good fortune to enjoy in temporarily presiding over so distinguished a body of experts as we have here today.

"The dignity and importance of the work before us is well evidenced by the readiness with which so many men, eminent in professional and industrial life, have responded to the President's invitation to judge the merits of the splendid collection of exhibits at this great universal Exposition. For the performance of this task some of you deserve special thanks for coming from considerable distances to assist in determining the awards rightly due in this friendly rivalry and competition for supremacy in the arts of peace.

"Your knowledge and experience, coupled with the confidence and respect you enjoy in public estimation, gives ample assurance of wise and fair minded judgment in all your conclusions.

"I wish again the thank you for your valued co-operation and to say that the Department of Liberal Arts gladly places all its facilities at your disposal and will esteem it a privilege and pleasure at all times to render you every possible service in the discharge of your highly responsible duties."

The Chief then explained to the Jurors the following

subjects:

Composition of International Jury of Awards - Group Juries - Department Jury and Superior Jury.

Group Juries commence work May 3d, and complete work within twenty days.

Group Juries are recommending bodies, and not awarding bodies.

Group Juries notify exhibitors of the date and approximate hour when they will review each exhibit, so that the exhibitor may have a competent representative on hand to explain his exhibit and answer questions.

Total number of Jurors: 315 Domestic; 120 Foreign::435

Number of Liberal Arts Jurors: 46 - Domestic 28 and Foreign 18.

Special Rules and Regulations, containing suggestions.

Suggested decimal scale.

Adoption of method of procedure, hours, etc.

Liberal Arts Exhibits located in other buildings.

NOTE: See Rules and Regulations in Folio.

Election of Chairman, Vice-Chairman and Secretary of each Group Jury. Present filled out questionnaires to enable them to commence work.

The Chairman also stated that Dr. Henry Hugo Lieber was present and would represent German exhibitors, but that he would not have the power of a vote, though having the privilege of aiding and advising in regard to German exhibits on all Juries.

Secretaries of respective Groups will keep records of each day's attendance; also rough minutes of principal actions taken.

When Chairman of a Group is absent Vice-Chairman to act, when there is a quorum.

On motion, duly made, seconded and carried, it was decided that Mr. Hardee should act as Chairman and that in his absence Mr. Kerrigan would act as Chairman.

Moved by Mr. Armes and seconded by Mr. Fisher that the decimal scale suggested in the Rules and Regulations be adopted, with the understanding that it could be changed if desired before the Juries start reviewing exhibits.

The following officers were elected by the respective Groups:

Group 29-30-31-32
Chairman: William D. Armes
Vice-Chairman: Ki Sato
Secretary: Ralph W. Stone

Group 34
Chairman: L. A. Fisher
Vice-Chairman: C. T. Hsia
Secretary: Phillip Fox

Group 35-36
Chairman: Edmund O'Neill
Vice-Chairman: E. deKruyff
Secretary: Wm. Bodeman

Group 37-38
Chairman: Ettore Patrizi
Vice-Chairman: Geo. W. Stewart
Secretary: Henry Dreher

Group 39
Forms part of joint Jury composed of representatives from the Departments of Liberal Arts, Manufactures, Machinery and Transportation.

Group 40-41-42-43
Chairman: S. Positano
Vice-Chairman: A. H. Markwart
Secretary: Morris O. Eldridge (Provided he gets permission from U. S. Government to serve on this Jury)

The Chairmanreported that the Joint Jury on electrical exhibits (which will pass upon the exhibits in Group 39 of Liberal Arts) had elected the following officers:
Chairman: W. B. A. Ryan
Vice-Chairman: Vito Catastini
Secretary: A. H. Holloran

Mr. Hardee then read the list of jurors appointed by the President of the Exposition to each of the Groups in the Department of Liberal Arts.

The Chairman informed the conference that Jurors who had not received passes should pay the admission fee and add same to their expense account.

There being no further business the meeting was regularly adjourned until Tuesday morning, May 4, 1915.

(Signed) Theodore Hardee

Chairman.

NOTE: it was necessary after the Juries had begun their activities to make a change in Group 29. Mr. William D. Armes retired and Mr. Ralph [illegible]. Stone acted as Chairman in his place.

Following out the organization meeting, the next meeting was held on the morning of May 4, 1915, minutes of which follow:

15 Meeting called to order by the Chairman.

The Chairman announced that the Group Juries may follow their own inclination in regard to using the decimal scale, but that one rule must apply to all Groups, in order that method of procedure may be uniform.

Dr. Lieber was today added to Group 35-36 as a Juror.

On motion duly made, seconded and carried, five points were added to #55a, which now reads:

> "Value of the product, process, machine or device as measured by its usefulness, its beneficent influence on mankind in its physical, mental, moral and educational aspects. Counting not to exceed 30."

On motion duly made, seconded and carried #55f was amended, five points being taken away. This section now reads:

> "For excellence of maintenance. Counting not to exceed 5."

On motion duly made, seconded and carried it was decided that all exhibits, except Government exhibits, were to be judged by the decimal scale as amended.

Mr. Hardee suggested that the Jury select a committee of seven, one member from each Group Jury, to work out a system of judging Government exhibits.

On motion duly made, seconded and carried it was decided that the Chairman of each of the Group Juries should appoint a member to represent his Group on a committee of seven, who would work out a system of judging Government, State and Municipal exhibits, to which the decimal system could not reasonably apply.

Mr. Hardee announced that every exhibitor had been notified to be ready any time to show exhibits, but that if representatives of the exhibitor were out when the Jury called, word was to be left to have the representatives on hand later, when the Jury would return.

On motion duly made, seconded and carried it was decided that an informal exchange should be made of Questionnaires if they were in the wrong Groups.

On motion duly made, seconded and carried, the meeting adjourned until Wednesday at 9:30 A. M., May 5, 1915.

(Signed) Theodore Hardee

Chairman

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Meeting called to order by the Chairman.

The Chairman announced that the following changes had beenmade in the Italian representatives on Juries:

Group 33: Mr. Luis Mastropasqua instead of A. Colosanti.
Group 37-38: Ettore Patrizi instead of Ernesto Nathan.

These Groups have been notified individually of changes.

In answer to questions the Chairman informed the Jury as follows in regard to awards:

That an exhibit shall receive only one award in any Group. That ordinarily only one grand prize in each Group may be awarded, but that if two exhibits measure exactly the same, the Jury may give two grand prizes.

That Juries may make any recommendations they see fit in regard to awards and be sure of the respectful consideration of the Superior Jury.

That each exhibit in each class is entitled to an award, providing it measures up to the standard required. For instance - although telescopes, binoculars and opera glasses are all in one class, exhibitors of telescopes are entitled to medals, and so are exhibitors of binoculars and opera glasses. In short, telescopes form an exhibit, binoculars form an exhibit and opera glasses form an exhibit.

That Juries may use their own discretion in regard to Questionnaires made out by this Department.

That there is a collaborative award for collaborators, as per rule 55, Page 10, of Rules and Regulations.

The Chairman asked the respective Juries to change the markings on sections #55a and 55f as per revisions decided on in regular meeting of May 4th.

On motion duly made, seconded and carried, the meeting adjourned until 9:30 A. M. Thursday, May 6, 1915.

(Signed) Theodore Hardee

Chairman.

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1915.

Meeting called to order by the Chairman

The Chairman requested that Secretaries of Group Juries give to Miss Scullin a memorandum of respective Jury's attendance.

The Chairman requested Mr. O'Neill to communicate with members of committee of seven, chosen to work out a system of judging Government, State and Municipal exhibits to which decimal system could not reasonably

apply, with a view to mapping out method of procedure.

The Chairman announced to the conference that a dinner was to be given in honor of the Jurors of Liberal Arts by the Chief of the Department at 7:30 o'clock Thursday evening, May 13th. This dinner is to be both formal and official, and will be given in the Inside Inn, Exposition Grounds . . . .

The meeting adjourned until further notice from the Chair.

(Signed) Theodore Hardee

Chairman

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The meeting was called to order by the Chairman.

The Chairman requested Professor O'Neill to make a report on what conclusions had been reached by the committee appointed to consider method of procedure in making awards on Government, State and Municipal exhibits. Professor O'Neill reported as follows:

"That at a meeting of the Special Committee appointed by Mr. Hardee, composed of Chairman of Group Juries of the Department of Liberal Arts, to consider the question of reviewing Government, State and Municipal exhibits, the following gentlemen were present - Mr. Harada, Mr. Fischer, Professor O'Neill, Mr. van Geuns and Mr. Positano.

After a general discussion of the subject a sub-committee was appointed consisting of Professor O'Neill, Mr. Wolff, Mr. Positano and Mr. Harada, to formulate a definite method of procedure. This committee decided that the decimal system used in the Group judging would not be practicable and recommended that exhibits of Governments, States and municipalities be judged by general impression, taking into consideration all the conditions surrounding the exhibit.

(Signed) Edmund O'Neill, Chairman".

On motion made by Mr. Bodeman, seconded by Dr. Lieber and unanimously carried the committee report read by Professor O'Neill, determing the method of judging Government, State and Municipal exhibits, was adopted as read.

Mr. Harada informed the Chairman that the Japanese Government wished to be exempt from competition for awards, desiring only honorable mention for anything which the Jury might see fit.

Mr. Hardee informed the conference that Sweden, Canada and France had also requested to be exempt from competition; and

U.S. Government exhibits are entered for award for competition wherever other Governments are exhibiting the same kind of exhibit. If they are not the same kind of exhibits an award may then be made to the Government, if the Jury deems it worthy of the honor.

Mr. Hardee suggested that Foreign representatives on Group Juries talk to Commissions of their respective nations to find out if they wish their exhibits reviewed, and, if so, request them to fill out Questionnaires and send them to this Department.

On motion duly made, seconded and carried the meeting adjourned until further notice from the Chair.

(Signed) Theodore Hardee

Chairman

NG
1915

Meeting called to order by the Chair.

This meeting was called for the purpose of having official photographs taken of the Group and Department Juries of Liberal Arts, a banquet picture having been taken the night before of the Group Jurors entertained by the Chief at the Inside Inn.

After the pictures had been taken the jurors returned to the Jury Room to discuss giving a dinner to Mr. Hardee and Mr. Kerrigan, those two gentlemen having been ex-

cluded from the room. A committee was appointed to formulate plans for this dinner, but it was finally decided to present Mr. Hardee and Mr. Kerrigan with testimonials expressive of their regard. Mr. Positano was appointed a committee of one to select these testimonials.

There being no further business the meeting was regularly adjourned.

(Signed) Theodore Hardee

Chairman

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At the close of the work of the Group Juries there was a special meeting called and gifts were presented to the Chief of the Department, Mr. Theodore Hardee, the General Superintendent, Mr. H. [illegible]. Kerrigan and the Secretary of the Jury, Miss E. F. Scullin, minutes of which meeting appear below:

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This meeting was called by the Jurors of Liberal Arts for the purpose of presenting Mr. Hardee, Mr. Kerrigan and Miss Scullin with souvenirs.

Mr. Harada had been appointed master of ceremonies, and in a very able address presented Mr. Hardee with a handsome silver coffee set in token of the high regard in which he was held by the International Jury on Awards for the Department of Liberal Arts.

In a few brief words Mr. Hardee thanked the Jury, expressing his surprise and pleasure in the unexpected testimonial and souvenir of his association with the distinguished gentlemen who had so freely given of their time and talent to serve on the Jury in the interests of progress and education.

Mr. Kerrigan was presented with a silver cigarette case and in turn expressed his keep appreciation and the pleasure it would give him to keep this token in his home as a constant reminder of the pleasure he had derived from his workwith the International Jury on Awards.

Miss Scullin was presented with a silver vase, Mr. Harada wishing her the pleasure of having it always filled with flowers, which he said outrivaled Solomon in all his glory.

The Meeting was regularly adjourned.

(Signed) Theodore Hardee

Chairman

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1915 Meeting was called to order by Mr. Hardee.

Mr. Hardee requested officers of Group Juries to sign all papers, and to hand in Group Reports of finding to Mr. Kerrigan. This was done.

The Group Jury was then dissolved and the Department Jury automatically came into existence, being composed of the Chairman and Vice-Chairman of the various Group Juries.

The Meeting was regularly adjourned.

(Signed) Theodore Hardee

Chairman

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After the disorganization of the Group Juries, the Department Jury held their first meeting, minutes of which, follow:

ING
,1915 Meeting was called to order by Mr. Hardee.

Those present were:

Ralph W. Stone
Ki Satow (Japan) (29-32)

J. Harada (Japan)
S. L. Stein (33)

L. A. Fischer
C. T. Hsia (China) (34)

Edmund O'Neill (35-36)
E. deKruyff (Netherlands)

S. H. vanGeuns (Netherlands)
Carl Hein (37-38)

Frank Wolff (39)

S. Positano (Argentine)
A. H. Markwart (40-43)

Four domestic and three foreign Chairmen.

Mr. Hardee requested officers of Group Juries to sign all papers.

Mr. Hardee read special rules covering election of Chairman and Vice-Chairman of Department Jury.

On motion made by Mr. Fischer, seconded by Messrs. Hein, Stein and Stone, and unanimously carried, Professor O'Neill was elected Chairman of the Department Jury.

On motion made by Mr. Stein, seconded by Messrs. Fischer and Stone, and unanimously carried, Mr. Harada was elected Vice-Chairman of the Department Jury.

In accordance with Rule 26 of "Rules & Regulations", Mr. Hardee suggested Mr. Kerrigan as Secretary of the Department Jury.

On motion made by Mr. Stone, seconded by Mr. Wolff and unanimously carried, Mr. Kerrigan was appointed Secretary of the Department Jury.

Mr. Hardee informed the Department Jury that its work must be finished by Friday, May 28th, 1915.

Mr. Hardee informed the Department Jury that the collection of pictures of Shields, Dixon and Dwyer was sent to the Exposition only on the condition that they were not to be entered for competition, and asked the consent of the Jury to the withdrawal of all Questionnaires covering these pictures, if such withdrawal were approved by Dr. Skiff, Director-in-Chief.

Medals of Honor had been awarded by Group Juries to the Remington and Underwood Typewriter Companies and to the Victor and Columbia Phonograph Companies. Mr. Hardee recommended that these companies be given Grand Prizes instead of Medals of Honor.

Mr. Hardee also recommended that every exhibitor who had put up a booth and had tried to make a creditable display be given at least Honorable Mention.

Mr. Markwart spoke of the high standard of everything connected with the Exposition and said that he believed this high standard should maintain in regard to making awards for exhibits in order that the medals might "mean something".

In answer to a question by Mr. Stone, Mr. Hardee informed the Department Jury that reasons for making awards might be discussed with Department Jury by Group Chairmen.

Mr. Hardee read the following letter, which had been sent to all exhibitors in the Department of Liberal Arts, to the Department Jury:

> "If you have any reason to believe that you have not had proper attention or have not made sufficient demonstration to the Group Juries, please notify this office at once as the Jury activities are just about to terminate.
>
> Yours very truly,
>
> (Signed) Theodore Hardee
> Chief of Liberal Arts".

Liberal Arts Department Jury

Mr. Hardee recommended that the Department Jury appoint a committee to examine exhibits of discontented exhibitors, which committee may recommend to this Jury a modification of awards.

Mr. Hardee also informed the Department Jury that one of its duties was to preserve an equilibrium in awards in various Groups.

In answer to questions from the jurors, Mr. Hardee informed them of the following points:

> Awards are to be given to the manufacturer and not to the exhibitor, but in the case of a collective exhibit an award may be given to the collector of the exhibit and also to individual manufacturers in the collective exhibit.
>
> Only one award shall be given to a collective exhibit, but thenames of all the contributors to such collective exhibit may be entered on the diploma awarded, and each participant shall receive a copy.

Mr. Hardee will inform jurors at next conference if loan exhibits are open for award.

Rules No. 23 to No. 29, inclusive, in "Rules & Regulations" were read and discussed.

On motion made by Mr. Markwart, seconded by Mr. Fischer and unanimously carried, the meeting adjourned to the call of the Chair.

(Signed) H. W. Kerrigan

Secretary.

ING
,1915

Meeting called to order by Professor O'Neill, Chairman of Department Jury.

Those present - O'Neill, Harada, Stein, Fischer, VanGuens, Hein, Markwart, Stone and Wolff.

On order of the Chairman it was decided that each Group be taken in order, beginning with 29-30-31-32, in order to cover every Group Jury.

Owing to the above Group not being ready Group 37-38 was first considered.

> There was some discussion on the question of the relative values of Chinese musical instruments, compared with American and European instruments. It was decided in open discussion that the Chinese instruments be judged according to their own standard of tone, construction, etc., and given consideration accordingly by the Department Jury of Awards.

On discussing the disposition of Foreign exhibits it was decided that the report of the Jury as submitted be accepted.

The next Group in order taken up was No. 39, Mr. Wolff, Chairman, reporting. There was an open discussion on how the Aero Fire Alarm should be judged for award. This was referred to the Composite Electric Jury.

Chairman Harada reported for Group No. 33, with Vice-Chairman Stein.

> There was a short discussion on how the United States Government exhibit of photographs was to be judged. It was decided that it should be accepted as submitted by Group No. 33, being open for award the same as any other exhibit.
>
> There was some discussion on the Kathryn Hopkins exhibit and what disposition might be made of it other than Honorable Mention, and it was decided that it should stand as submitted by Group Jury No. 33.

There was a brief discussion on the question of how collaborators should be judged and given credit in the various exhibits.

There being no further business, the meeting was regularly adjourned until Wednesday, May 26, at 9:30 A.M.

(Signed) H. W. Kerrigan

Secretary.

TING
5,1915

Meeting was called to order by the Chairman, Professor O'Neill.

Those present - Hein, vanGeuns, deKruyff, O'Neill, Wolff, Markwart, Harada, Stein, Stone, Fischer and Hsia.

Groups 37-38, 39 and 33 were discussed.

The Questionnaire of the Acheson Graphite Company for phonograph contents was combined with others of that Company on minor appliances and a general award for the collective exhibit was recommended.

The same action was taken in the case of other exhibitors having minor exhibits under different Questionnaires, such as the General Electric Company, the Thordarsen Electric Company, the Foxboro Company and the General Bakelite Company.

In the Photographic Group it was decided that the photographs of Indians by Marcus Benjamin be included in the Government collection.

It was decided that the eshibit of the General Electric Company did not come under the heading of Instruments of Precision and the Questionnaire was referred to Group No. 36 for a general combined award.

The coin collection of Farran Zerbe was awarded a Gold Medal for Educational Purposes.

There being no further business, the meeting was regularly adjourned.

(Signed) H. W. Kerrigan

Secretary.

ING
,1915.

Meeting was called to order by the Chairman, Professor O'Neill.

Those present - O'Neill, Wolff, Harada, Stein, Fischer, Positano, Hsia, vanGuens, Hsia, Btone and Markwart.

Groups 35-36, 40-41-42-43 were discussed. Various awards were adjusted. The American Red Cross was awarded a Grand Prize for their collective work combining the awards for partial exhibits in various Groups.

It was noted to have the Exposition attendants ascertain the names of the collaborators in the Panama Canal Health Service in addition to General Gorgas, so that awards could be made to them.

There being no further business the meeting was regularly adjourned.

(Signed) H. W. Kerrigan

Secretary.

ING
,1915

Meeting was called to order by the Chairman, Professor O'Neill.

Those present - O'Neill, Positano, Hsia, Markwart, vanGuens, Wolff, Stein, Stone, Fischer, Harada, Satow and Hein.

Various belated reports from the various Groups were presented and discussed, and awards made.

Report of the special Committee on Government Exhibits (consisting of Messrs. Markwart, Positano and Hsia, with Wolff and Fischer as conductors) was presented and their findings adopted. Awards are noted in the corresponding Questionnaires.

Corrections in awards were made. The request of Mr. Satow to have the awards in three cases raised was denied except in the case of one paper exhibit.

The sub-Jury on Architecture was reported on by Mr. Mathews. Some findings were adjusted. The final awards appear in their report.

It was noted that any unfinished business be completed by the Chairman wherever possible, and that the remainder be referred to the Superior Jury.

There being no further business the meeting adjourned, sine die.

(Signed) H. W. Kerrigan

Secretary.

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"TO THE SUPERIOR JURY OF AWARDS,
PANAMA-PACIFIC INTERNATIONAL EXPOSITION.

DEAR SIRS:

The Department Jury of the Department of Liberal Arts met at the appointed time, viz: Monday, May 24, 1915, at 9:30 A. M., with the following members present:

Edmund O'Neill, E. deKruyff, Ralph W. Stone, Ki Satow, J. Harada, S. L. Stein, L. A. Fischer, C. T. Hsia, S. H. vanGeuns, Carl Hein, Frank Wolff, S. Positano and A. H. Markwart.

Professor Edmund O'Neill was elected Chairman and Mr. Jiro Harada Vice-Chairman.

Appended are the minutes of the meetings, which give in detail the work of the Department Jury.

The Department of Liberal Arts included a great number of exhibitsof most diversified character.

Books, maps, heavy and fine chemicals, musical instruments, artificial teeth, astronomical and microscopical apparatus, road making materials and machines, electric apparatus, typewriters, photographs, dog remedies, artificial limbs and scores of other exhibits of widely different character and value made this Department one of the most difficult to judge.

The Group Juries were made up of different types of men; their points of view were different; their standards of values varied. The results of the awards are, therefore, not always uniform - in some cases, perhaps discordant.

The task of the Department Jury was to equalize their awards, but the time allotted to this work was too short. There was also a shortage of clerical assistance. All the office force was overworked. Everyone did the best he could under the circumstances, some working from twelve to nineteen hours a day at times.

Considerable difficulty was encountered with many of the foreign Questionnaires, because data was not supplied owing to various misunderstandings. While the exhibits themselves frequently were not worthy of any award, there were various conditions connected with them that seemed to necessitate raising the valuation and in some cases this was done. The representatives of other exhibits were not so zealous and insistent, and consequently their exhibits did not fare as well.

The Superior Jury should equalize these discrepancies.

The recognition of collaborators was not treated uniformly. In some Groups there were numerous recognitions; in others complete omissions. The specific instances will be communicated verbally.

Considering the Department of Liberal Arts as a whole, with its multitudinous variety of exhibits, the work was well done. Whatever was not accomplished is due to want of time and not to lack of willingness and application.

This same spirit of willingness and self-sacrifice was shown by all the personnel of the office and, on behalf of the Jury, I wish to express my appreciation of their efforts to lighten the labors of the Jury and to further the interests of the Exposition.

The reports from Group Juries were passed upon in turn, discussed and corrections made in some cases. A number of separate awards were combined into one award - for example: Acheson Graphite Company which had a number of exhibits in various buildings (some quite small), which had been passed upon separately by the various Juries, were combined and a Grand Prize awarded for the collective exhibit. The same was done in the case of certain scientific displays of the General Electric Company, which were combined in one grouping and a Grand Prize awarded as a collective exhibit. At the same time different awards for special articles were allowed to remain. The same procedure was adopted for the Foxboro Instrument Company, and the Thordarsen Electric Company.

A special committee, consisting of Messrs. Markwart, Positano and Hsia, was appointed to determine the character of awards given to Government exhibits. To the committee were added Messrs. Fischer and Wolff, who did not take part in the actual awarding, inasmuch as they were both officials of the Government. Their report was submitted later and the corresponding awards made.

It was recommended by the Department Jury that the Exposition authorities take steps to ascertain the collaborators engaged in the construction of the Panama Canal Health Service in addition to General Gorgas, so that appropriate collaboratorial awards be made to such collaborators.

It was suggested that for Government exhibits a special commemorative award be given instead of the usual awards, but it was decided to use the regular system for such Government awards.

The Group on Architecture reported that the most attractive booth in the Liberal Arts Building was the one of the Eastman Kodak Company.

In giving awards it was decided that the Foreign exhibits be treated very leniently for many reasons, and in the awards this suggestion has been carried out.

There were a number of late Questionnaires submitted that could not be considered by the Group Juries or the Department Jury in the time at their disposal, and it was voted that all unfinished business be taken up by the Chairman and Vice-Chairman of the Department Jury and reported directly to the Superior Jury.

The Department Jury adjourned sine die.

Respecfully,

(Signed) Edmund O'Neill,

Chairman".

On May 28, 1915, the Department Jury having disorganized, the Chairman and Vice-Chairman of this Jury, Professor Edmund O'Neill and Hon. J. Harada, were automatically elevated to meet with the Superior Jury as representatives of this Department.

CULTIES
NTERED

It might be well to note here some of the difficulties encountered by the Jurors. The first complaint after the Jurors had commenced their work was that they feared they were not going to have sufficient time to go over all the exhibits as thoroughly as they should. This was perhaps the condition which, more than anything else, hindered them from giving the attention which would have been given to each individual exhibit. This was brought about to some extent by the late arrival of Questionnaires from

exhibitors who, although notified early regarding the filling out of these important blanks, did not return them to the Department on time. It was quite evident that the exhibitors did not fully realize the importance of these Questionnaires, and for some reason delayed sending them in. This no doubt has always been the rule, but when they were forced to understand that their products would not be judged or considered for award unless the Questionnaires were made out and returned to the Department, they made extra efforts to get them before the Jury.

Another important and regretable fact was the misunderstanding by a great many of the exhibitors of how to fill out the Questionnaires, which in many cases was improperly done and in others left blank. This was naturally a detriment in judging their exhibit and proved costly in the ultimate awarding of prizes, because it was found impossible to inspect each exhibit as carefully as could have been wished, the Jurors depending and determining a great deal on what was embodied in the Questionnaires.

It was also noticeable in many of the booths that the attendants were incompetent, being unable to

properly demonstrate the particular exhibit which they represented, while in others the demonstrators were absent when the Jurors called, although appointments had previously been made. This, however, could not altogether be blamed on the demonstrators, for the reason that the Jurors were often held up longer than they had anticipated in another booth, thus makint it impossible for them to always arrive on schedule time.

Another feature was the scattered area covered by the Department of Liberal Arts, the Jurors having to make long trips to other buildings and isolated places on the Ground where exhibits of the Department of Liberal Arts were located.

In some cases with the smallness of the product buried away in some large exhibit, it was almost impossible for the Jurors to locate same.

To assure people being at their booths when Jurors called the Department sent out notices and had two of the Floor Superintendents call on the various exhibitors, preparing them for the Jurors' visit.

Where the classification did not cover some of the different products, it was necessary for the Jury

to combine or segregate the classification to clarify the work in hand, and as a means of determining the awards to be given. However, some of these questions and difficulties attending the activities of the Jurors are explained in the Minutes of the Jurors' meetings, as has been quoted.

VERY OF AWARDS. The full list of awards made by the Jury in the Department of Liberal Arts will be published later by the Superior Jury of the International Jury of Awards. The Medals of Award and Engrossed Diplomas accompanying are expected to be ready for delivery early in the Spring of 1916. This work is in charge of Mr. O. H. Fernbach, Secretary of the International Jury of Awards.

RY
QUET

On the 6th day of May, the Chief of the Department of Liberal Arts invited the members of the Jury to a banquet which was to be given at the Inside Inn on May 13th, 1915. This brought together in a social way the Jurors and made a very nice evening for the guests. All the Jurors were present.

The speech of the evening was made by the Hon. Jiro Harada, who went into the details of the activities of the Jury and the help given by the Department Chief and the members of his staff. This address made by Mr. Harada was a very impressive one, showing clearly the disposition of the Jurors to cooperate with the Department, and touching on the closer relationship which would be brought about by the association of the domestic and foreign representatives acting as Jurors. This in itself would create a feeling of comradship which would prove of great benefit socially and commercially to the different nations represented. The sentiment expressed by Mr. Harada was most impressive and served to bring about a very friendly feeling between all those present.

It was comparatively quiet following the activities of the International Jury of Awards and there were very few events which attracted any particular attention or interested the exhibitors to any extent. Although the great majority of exhibitors were satisfied with the awards there were some who were disappointed at not receiving the highest consideration. This was of course to be expected.

As a break in the regular routine and from the regular events which were carried on schedule in the various exhibits, we were honored on October 18 with the first official visit of the President to inspect the Palace. This in itself was quite an affair. All the exhibitors prepared beforehand to receive the President and special decorations were arranged to make their booths and the Palace attractive.

Accompanied by his Aide, the President was met at the South Entrance of the Palace of Liberal Arts by Chief Theodore Hardee and General Superintendent H. W. Kerrigan, Floor Superintendent Charles H. Bolton, and a Committee of the Liberal Arts Progress Club, composed of Messrs. Paul Mahony, George W. Peck, Thomas H. Griffin, Howard A. Boys, C. J. Blanchard, J. C. Boykin,

H. C. Carson, J. C. Decatur and H. D. Miller.

Before proceeding for the official inspection of the building a picture of the President and party, with members of the Reception Committee, was taken at the Main Entrance, after which the party was conducted through the various aisles of the Exhibit Palace.

Passing from the Domestic Section the party, lead by Chief Hardee and General Superintendent Kerrigan, was taken into the Foreign Section, consisting of the Netherlands, Japan, China, Argentina, Italy, Uruguay, Portugal and Germany, where they were met by the Commissioners and representatives of these various Countries.

They were then conducted through the wonderfully interesting exhibits of the National Government by Mr. J. C. Boykin, Assistant to the Chairman of the Government Exhibit Board.

ON
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When all the announcements of awards had been made and the President had made his official visit, the Department gave more attention to Conventions that were held on the Grounds relating to the various Groups of Exhibits in the Department of Liberal Arts. These Conventions entailed more or less specific interest by the different Groups represented. By cooperating with them the Department was able to create quite a bit of interest, not only from the exhibitors themselves but from the general public and those particularly interested in these subjects.

For instance, when the engineers had their Convention, we provided a special program in the building, having a Special Committee and guards to take care of the engineers, conducting them to such exhibits as those exhibiting surveying instruments, scientific instruments and other displays interesting to them. In fact, the Department where it was possible covered every Group in this manner with the various Conventions and thus was able to create more or less public interest.

ISCO
UNCED.

While these Convention programs were going on the announcement came for "San Francisco Day", to be

held November 2, 1915. There had been so many events, however, up to this time that the exhibitors were not particularly interested in the beginning, feeling perhaps that they had contributed freely enough toward the advertising of the Palace, as well as giving gifts and samples to the public. However, the Department organized special committees and urged them to see the great possibilities for that day, calling to mind that all the different Expositions had had such a day.

The special committee had several meetings and sent out a communication which follows:

> "September 29, 1915.
>
> Sent to all Exhibitors' Home Offices:
>
> Tuesday, November 2, 1915, the anniversary of Don Gaspar de Portola's discovery of San Francisco Bay has been scheduled by the Exposition as "SAN FRANCISCO DAY". To make this DAY one of the greatest in the history of the Exposition the management is desirous of securing the cooperation of all exhibitors, and for this reason this Department will request your Company to help to make this DAY the great success which has been promised, and to contribute gifts to be given away as an added attraction, thus securing for the exhibitors all the publicity and advertising that they deserve.
>
> That this will be the largest and greatest day of the Exposition is assured when it is understood that the Exposition management has influenced the Governor of California to issue a proclamation, declaring November 2 a legal holiday. The Mayor of San Francisco will also issue a proclamation urging all good citizens to visit the Exposition. One of the Exposition's contributions to the attraction of the

Day will be the giving away of twenty gifts of one hundred dollars each, in gold, to holders of souvenir tickets, whose numbers draw them.

Extremely low rates will be made by transportation companies all over the Pacific Slope, and these companies will extensively advertise "San Francisco Day".

The City, State and local Federal Governments have been asked to give all their local employes a holiday, or at least a half holiday. The Governors of all Pacific Coast States have been requested to issue proclamations calling attention to the Exposition and urging their people to show their good will by attending same. All the Mayors of the different Cities have been requested to issue similar proclamations.

The Foreign and State Commissioners, who are exhibiting at the Exposition, will enter handsomely decorated floats, typical of their respective Countries, this being the first demonstration of its kind since the opening of the Exposition.

It is anticipated that the exhibitors, all told, will give away one hundred thousand or more gifts on "San Francisco Day", the advertising of which will bring the visitors to their respective booths.

Therefore, anything which your company can do to contribute toward making this a success will be appreciated by the Exposition and this Department particularly. That your Company will receive added advertising as well as helping the Exposition is borne out by the fact that the extensive advertising done on that day of the prizes to be given away is bound to bring the people to your booth and to every other exhibitor in the Department.

Any gift that you care to present will be more than appreciated. It does not necessarily have to be one of your own product, but anything which you think would attract the people to your booth.

It need not be expensive, nor need you confine yourself to one large gift. It may be many small ones if you so desire.

Already the Exposition and this Department have had promises from many of the leading firms, who have contributed toward the above, so you can judge that any gift, no matter what it may be, will be most acceptable to the Exposition on that day.

The plan will be to print handsome souvenir admission tickets with three coupons all bearing the same number, one to be deposited in the gate box, one for exhibitors' gifts and one for each person to wear, marked "I Paid", as it has been requested that even those holding permits for the Exposition period pay at least one admission on that day.

Yours very truly,

(Signed) Theodore Hardee,

Chief of Liberal Arts".

After the interest of the exhibitors had been aroused and they began to see the great possibilities offered by this day, the Department began its work of collecting gifts and finally succeeded in securing as much as four thousand dollars worth of gifts distributed by the following firms:

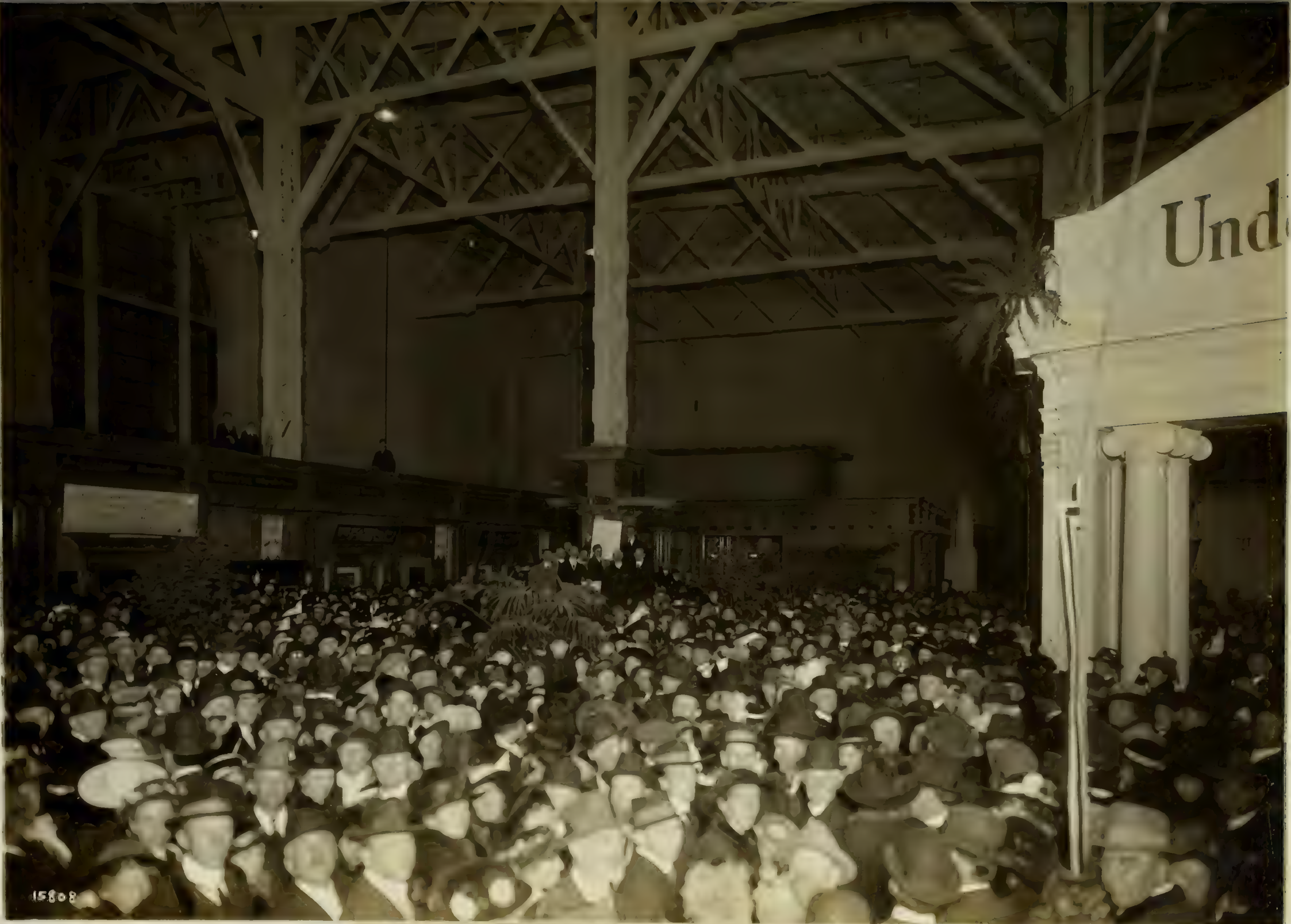
Name.	Value.
New York Barge Canal Exhibit	$ 20.00
Automatic Bookkeeping Co.,	10.00
American Telephone & Telegraph Co.	25.00
Masteroll Perforating Co.	10.00
Sonora Phonograph Co.	10.00
Solway Process Co.	25.00
Indexo Company	12.50
Gdneral Acoustic Co.	100.00
Carried forward,	$212.50

Brought forward,	$212.50
Collier Harvard Classics	15.00
Shering & Glatz	15.00
Owl Drug Company	125.00
Bausch & Lomb Optical Co.	9.00
Wisconsin Seating Co.	300.00
Grolier Society	22.50
Remington Typewriter Co.	50.00
Troeger Manufacturing Co.	3.00
Sprague-Hathaway Co.	59.50
Peerless Check Protecting Co.	50.00
Stevens Inventions Co.	201.00
Garford Manufacturing Co.	37.00
Egry Cash Registry Co.	50.00
Laughlin Fruit Refining Co.	50.00
Gem Ear Phone Co.	30.00
Paul Elder & Co.	75.50
San Francisco Chronicle Publishing Co.	23.25
H. M. Boys	10.00
Paul Rieger & Co.	51.00
Plapao Laboratories	9.00
Sterns Manufacturing Co.	6.00
U.S. Reclamation Service (Government)	731.00
W. W. Kimball Co.	700.00
Richter-Leblang	12.00
Indexo Finger Tooth Brush	12.50
Jonah Kumalae	15.00
Sperry-Hutchinson Co.	30.00
Nicholas Power Co.	50.00
Theodosa Durand	5.00
Piersen Telegraph Transmitter Co.	25.00
[illegible]. J. Worden	25.00
Funk and Wagnalls	38.00
E. N. Sewell	15.00
California Perfume Co.	42.00
Clark-Gandion Truss Co.	50.00
John Howell	28.00
Victor Talking Machine Co.	100.00
Gnu Sales Corp. (Copy holder)	20.00
Corona Typewriter Co.	50.00
Emerson Drug Co.	100.00
National Cash Register Co.	25.00
Geo. Wm. Hoffman Co.	186.25
Carried forward,	$3664.00

Brought Forward,	$3664.00
C. G. Conn, Inc.	135.00
Globe Ear Phone Company,	55.00
Carnes Artificial Limb Company,	42.00
F. W. Fitch Company,	75.00
Columbus Dental Manufacturing Co.,	10.00
Toledo Scale Company,	25.00
Baldwin Jewelry Company,	3.00
M. Hohner,	21.75
Zerbe Coin and Medal Booth	25.00
W. D. Henderson,	30.00
C. K. Petersen,	10.00
Vermillax Company,	5.00
Stevens Inventions Company,	300.00
Waldron & Dietrich (Utility Kits)	250.00
Western Union Telegraph Co.,	10.00
Schmidt Lithograph Company,	10.00
August E. Drucker,	50.00
Campbell Electric Company,	10.00
Total,	$4730.75

Particular interest was manifested by the exhibitors in trying to get more prizes than the other Palaces for San Francisco Day and we were very happy to say that when it had arrived we had, next to the Palace of Manufactures, the largest number of prizes, but in value we exceeded any of the Palaces, of which the exhibitors were very proud.

The most expensive gift presented that day was made by the United States Reclamation Service



Art Smith Presenting Piano, - San Francisco Day

Department, which gave as a prize five acres of land on the "Orland Project", the value of which amounted to $150 an acre or $750 for the five acres. The next highest prize which particularly attracted the attention of the public on this day was a Kimball Piano worth $700, presented by Eilers Music Company.

Although we did not tabulate the number of people in the building on that day, we can safely estimate that out of the 348,000 entering the gates of the Exposition Grounds at least 50,000 visited the Liberal Arts Department.

The number of prizes was so great that the winners did not call for at least two-thirds of them, so on the Saturday following, November 9, the Department made a still greater effort to satisfy the exhibitors, who had made such great preparations, and collected at least three thousand more gifts and made up a special program, having in all a total of about six thousand gifts.

.TORS'
DAY.

To attract the attention of the public and to give the exhibitors particular mention for this day, we called it the "Liberal Arts Exhibitors' Gift Day". The Special Days Department helped by posting many large

signs advertising the day at each of the gates, besides which the papers took it up to some extent, giving us no small publicity. This was very gratifying to the exhibitors. A special program was printed and it could properly be called another "Liberal Arts Day", so keen was the interest.

The Building was crowded to overflowing all day to such an extent that it was almost impossible for the various winners of gifts to receive their prizes. They were naturally forced to come out later to get them. We can safely estimate that out of 95,000, the attendance that day, the Liberal Arts Palace received at least two-thirds. It was indeed a splendid success as an advertising medium for the exhibitors, who were more than satisfied, and also for the Department.

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RAL
PALACE.

One of the most beautiful and impressive ceremonies of the Closing Day exercises, and particularly for the Liberal Arts Department, was the lowering of the flag of the Palace by the Chief of the Department, aided by President Charles C. Moore, and Director of Exhibits Asher Carter Baker.

For this short program a small platform was erected immediately in front of the South Main

Entrance of the building with the flag of the Department flying from one corner. At three o'clock on Closing Day, December 4, President C. C. Moore, accompanied by Captain A. C. Baker and Chief of the Department Theodore Hardee, escorted by two marines, two Exposition guards and two blue jackets, began the ceremony of closing the Palace of Liberal Arts. The escort came to attention and the crowd, attracted by the unusual ceremony, gathered around at this most sentimental little affair. The President opened the proceedings with an address as follows:

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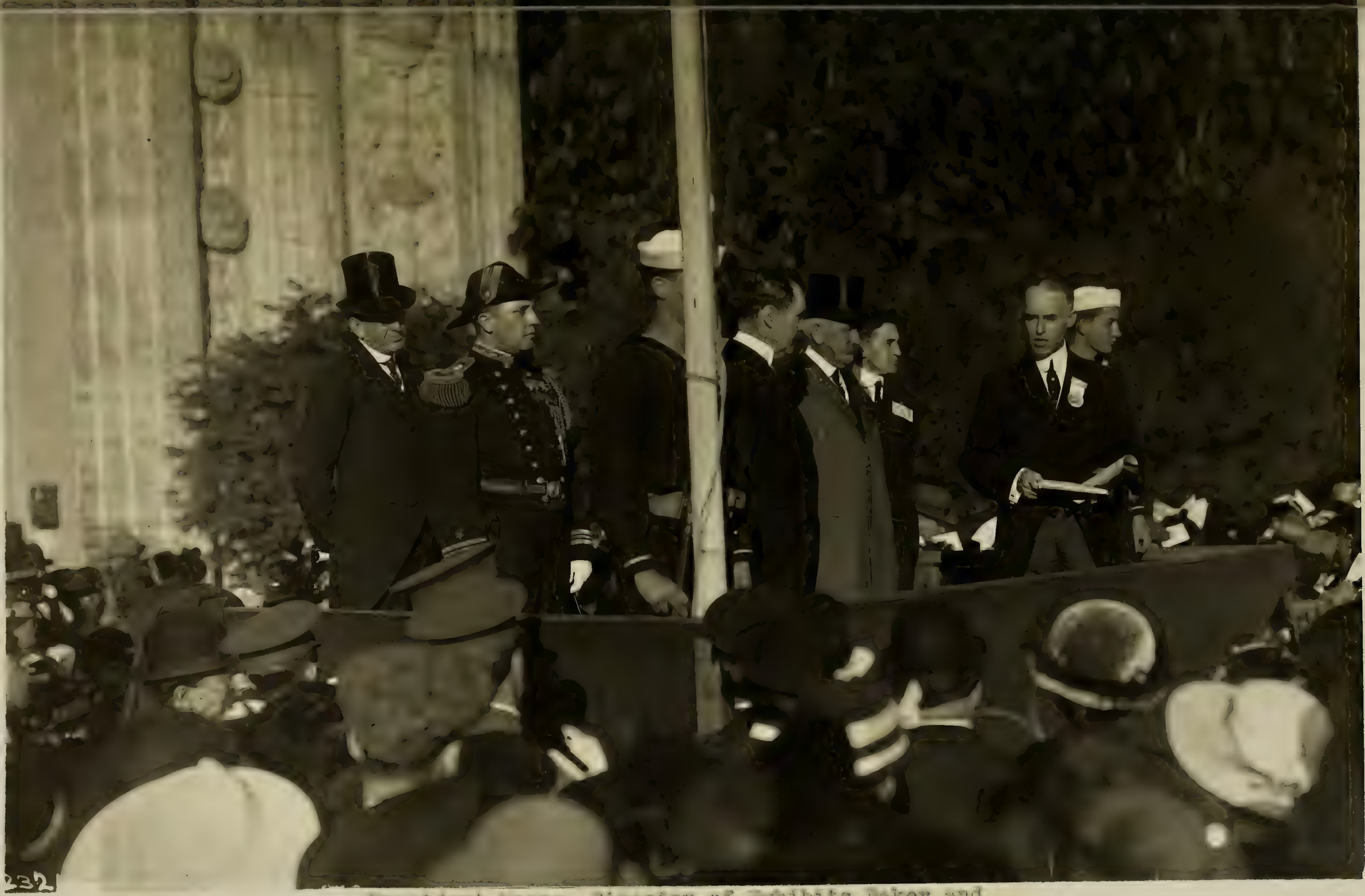
"Ladies and Gentlemen:

> Lovers of Liberal Arts - I know you are. It seems almost pitiful that it cannot go on. There has been so much, so very much within this splendid building to lift us up; enlighten; expand our minds, our policies and purpose. But the end has to come. It is now, and I am here as President of the Exposition to give official instruction to the Chief to pull down his flag; lower those colors that have flown so splendidly. To the Chief who has devoted himself heart and soul for the accomplishment which you and I have benefited from; to those splendid men and organizations who have so enthusiastically supported him and held up his hand in presenting to the World the Liberal Arts Section of this Exposition, the highest expression of progress; of human achievement and advancement in their respective activities. It has been a glorious thing and in the days to come he will look back with pride and with profit to that which it has been our privilege to drink from the fountain of knowledge which has been erected within



President Moore, Director of Exhibits Baker and
Chief Hardee, Closing Liberal Arts Palace.

> these walls. All these are, good friends, but a feeble expression of the sentiment which I know you all hold toward the contributors who have made this great Exposition which we hope will go into History, as well-loved. I cannot say more. I will now say to you Mr. Chief - You will please pull down your flag and you will please accept from me a definite and formal instruction that at 6 o'clock your Palace must be closed and from that time on memory will be all, must be all that will remain of you and those associated with you".

HARDEE'S
ONSE.

Chief Hardee then responded with a few appropriate remarks, closing as follows:

> "By authority vested in me as Chief of the Department of Liberal Arts by the President of the Exposition, I hereby announce that the Palace of Liberal Arts will be closed to the public at the hour of 6.00 P.M. The Town Crier will therefore, with due diligence, notify all visitors to leave this Palace not later than 6.00 P.M., and forever thereafter tell their neighbors of the wonderful achievements of the Panama-Pacific International Exposition held at San Francisco during the year 1915".

Before closing, Mr. Hardee introduced Mr. Herbert W. Kerrigan, General Superintendent of the Liberal Arts Department and stated his wish to make public acknowledgment than and there of the fact that much of the Department's success was due to Mr. Kerrigan's intelligent and painstaking efforts.

The Chief, with due ceremony, then handed the key of the Palace and the scroll to the Town Crier, who, costumed for the occasion in the uniform

of revolutionary days, stepped to the front of the platform, proclaiming to the people from the scroll as follows:

> "Hear ye. Hear ye, and hearken well. It is decreed that this, the Palace of Liberal Arts of the Panama-Pacific International Exposition, shall be vacated by six of the clock on this 4th day of December 1915, and shall from that hour henceforth remain closed and unoccupied. Hear ye. Hear ye, and witness the scroll of my authority and the key of my official office."

It was a quiet and impressive ceremony. The people you could see were affected by the little affair as they made their various ways in the crowd, and so ended the open activities of the Department of Liberal Arts.

EXPENSES OF DEPARTMENT OF LIBERAL ARTS.

Pre-Exposition Period	Total
January 1913	$523.51
February 1913	875.55
March 1913	690.87
April 1913	850.63
May 1913	687.10
June 1913	702.77
July 1913	630.49
August 1913	372.44
September 1913	123.97
October 1913	153.38
November 1913	623.70
December 1913	575.28
January 1914	623.16
February 1914	804.52
March 1914	496.91
April 1914	628.75
May 1914	558.58
June 1914	780.38
July 1914	658.58
August 1914	674.86
September 1 to October 4, 1914	755.66
To November 1, 1914	678.24
To November 29, 1914	255.44
To December 27, 1914	926.06
To January 24, 1915	958.75
To February 19, 1915	901.85
Total,	$16,511.43

Exposition Period	
To March 21, 1915	$648.63
To April 18, 1915	1,109.91
To May 19, 1915	1,225.47
To June 13, 1915	1,187.94
To July 11, 1915	848.52
To August 8, 1915	847.82
To September 5, 1915	793.38
To October 3, 1915	820.13
To October 31, 1915	955.61
To December 4, 1915	1,156.60
	$9,594.01
Expenses Exposition period, which are entered in period December 31,1915	201.96
	$9,795.97

CONCLUSION.

In preparing the foregoing report I have had a two-fold purpose in mind - - first, to make it a condensed yet correct summary of the activities of the Liberal Arts Department and - - second, to have it in form and character that will be of material service to the promoters of future Expositions.

In conclusion, permit me to express my very sincere appreciation of the indispensable assistance and support always so readily given me and my Department by the Director of Exhibits, Captain Baker. I also wish to express my deep sense of gratitude to President Moore for his confidence in me and the support and encouragement I have at all times received from him; to Vice-President Hale and the Committee on Exhibits, of which he is Chairman, for their ever helpful interest and support; and to the Director-in-Chief, Dr. Skiff, for his wise and sympathetic counsel and guidance on all occasions. I am likewise highly appreciative of the uniformly courteous and helpful cooperation of my brother Chiefs in the Exhibit Division, as well as all other Exposition

Officials with whom the Department of Liberal Arts and its staff came into official contact.

In closing I desire to make suitable acknowledgment of the splendid service rendered by every member of the Liberal Arts staff. To Mr. Herbert [illegible] Kerrigan, General Superintendent of the Department, is due the greatest possible credit for his very intelligent, loyal and satisfactory administration of its affairs during the Exposition period when the greater part of the Chief's time and attention was occupied in directing the Special Days and Special Events of the Exposition. Mr. Kerrigan's tact and executive ability were exemplified in the highest degree, and particularly in the important Jury work with which he was so closely associated. Mr. Charles H. Bolton, Superintendent of Installation, is likewise deserving of my warmest commendation for his able and energetic work in supervising erection of the booths, installation of exhibits and the maintenance of order and system on the floor of the Liberal Arts Palace during the entire Exposition period. Especial commendation is likewise due to Mr. Daniel R. Gailey, Superintendent of Photography and the Graphic Arts, Miss Gertrude Ferguson,

Secretary of the Department, Mrs. Della De Young, Chief Clerk and Miss Ella Scullin, Stenographer, for the excellent service they rendered.

I am only too glad of this opportunity to testify to the highly efficient and loyal service performed by each and every one of this Department's employes, which made possible whatever success history may accord to the Department of Liberal Arts at the greatest International Exposition the world has ever known.

Respectfully submitted,

Theodore Hardee

Chief of Liberal Arts.

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